

Fig.1

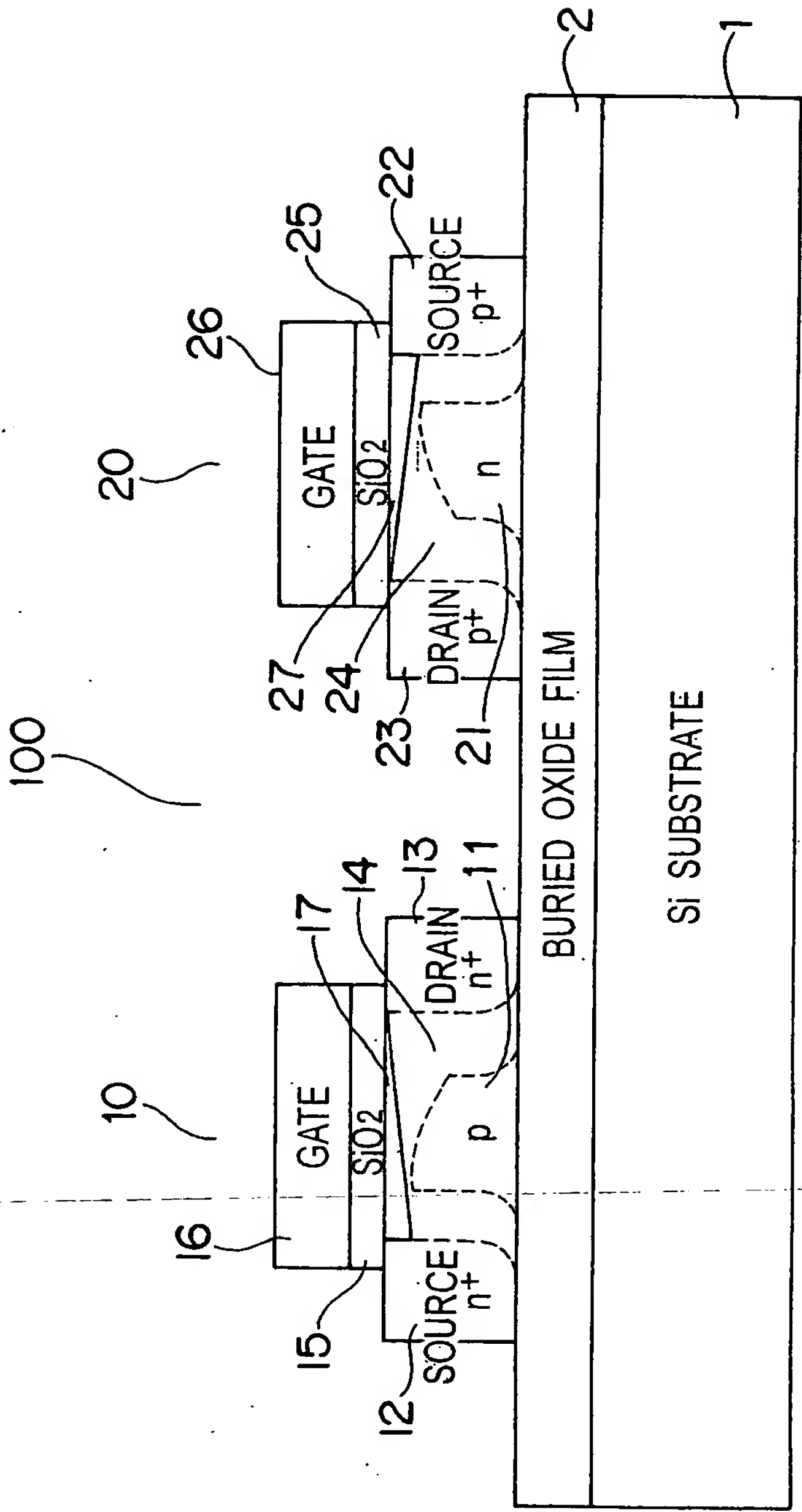


Fig.2

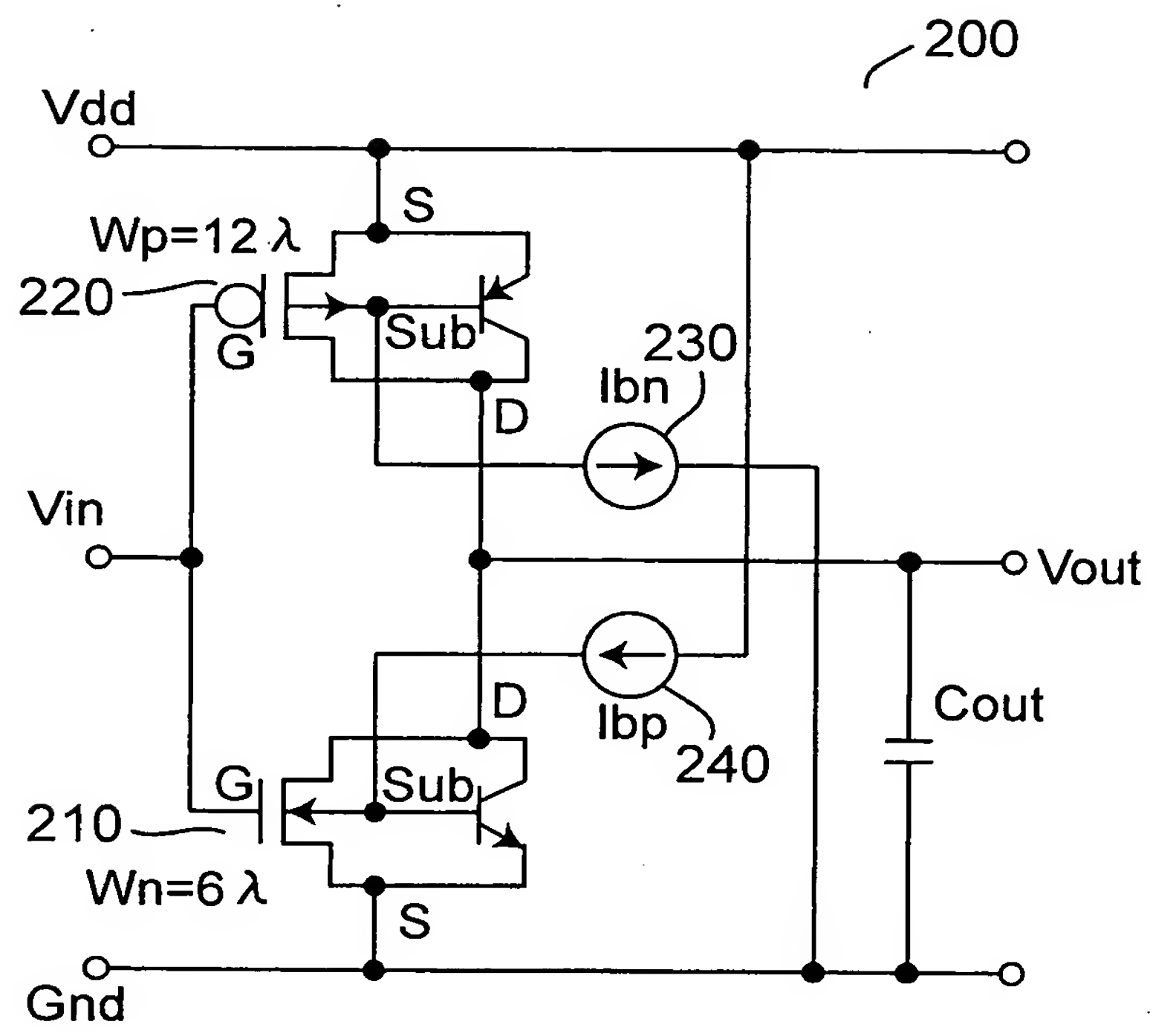
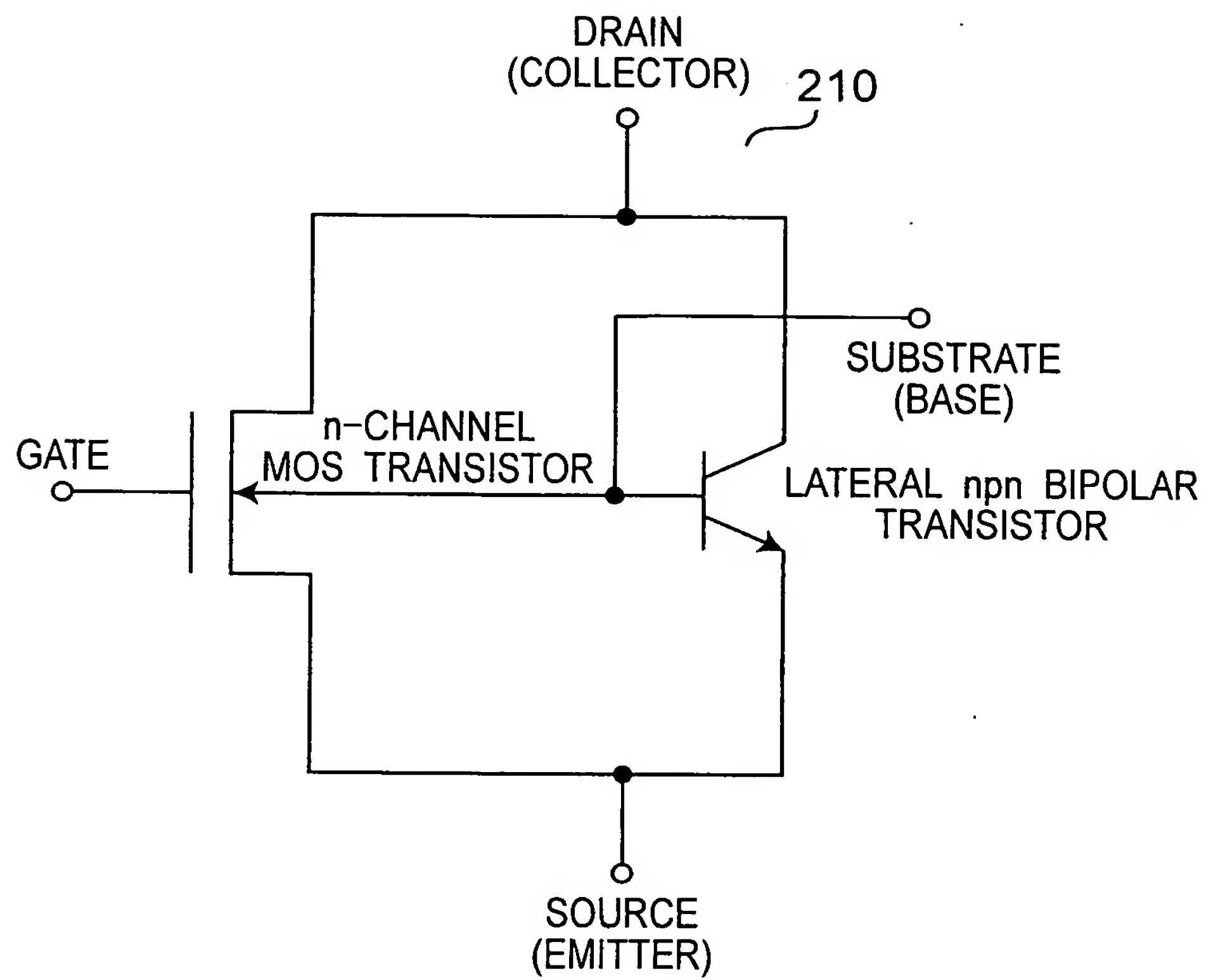


Fig.3

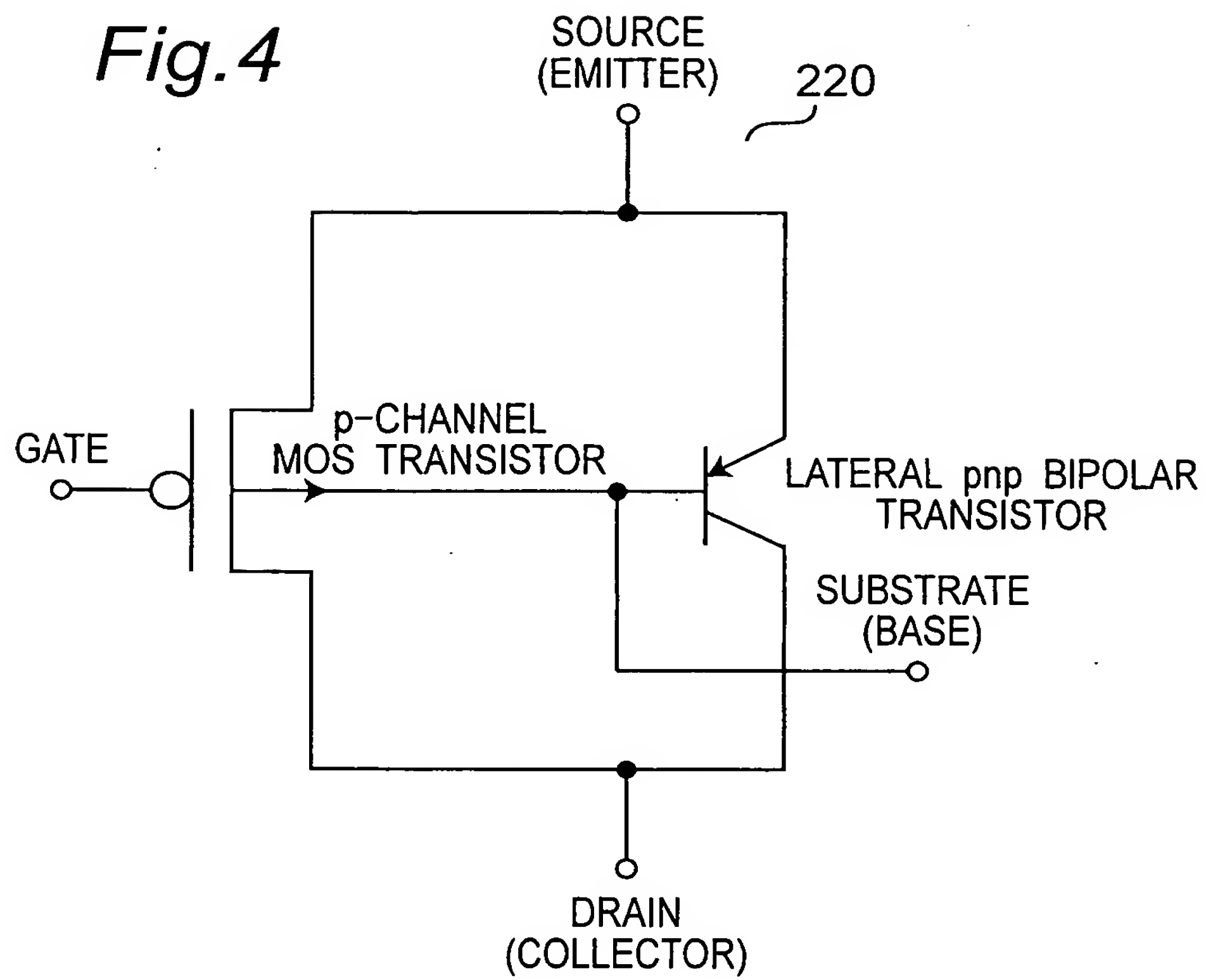


Fig.5

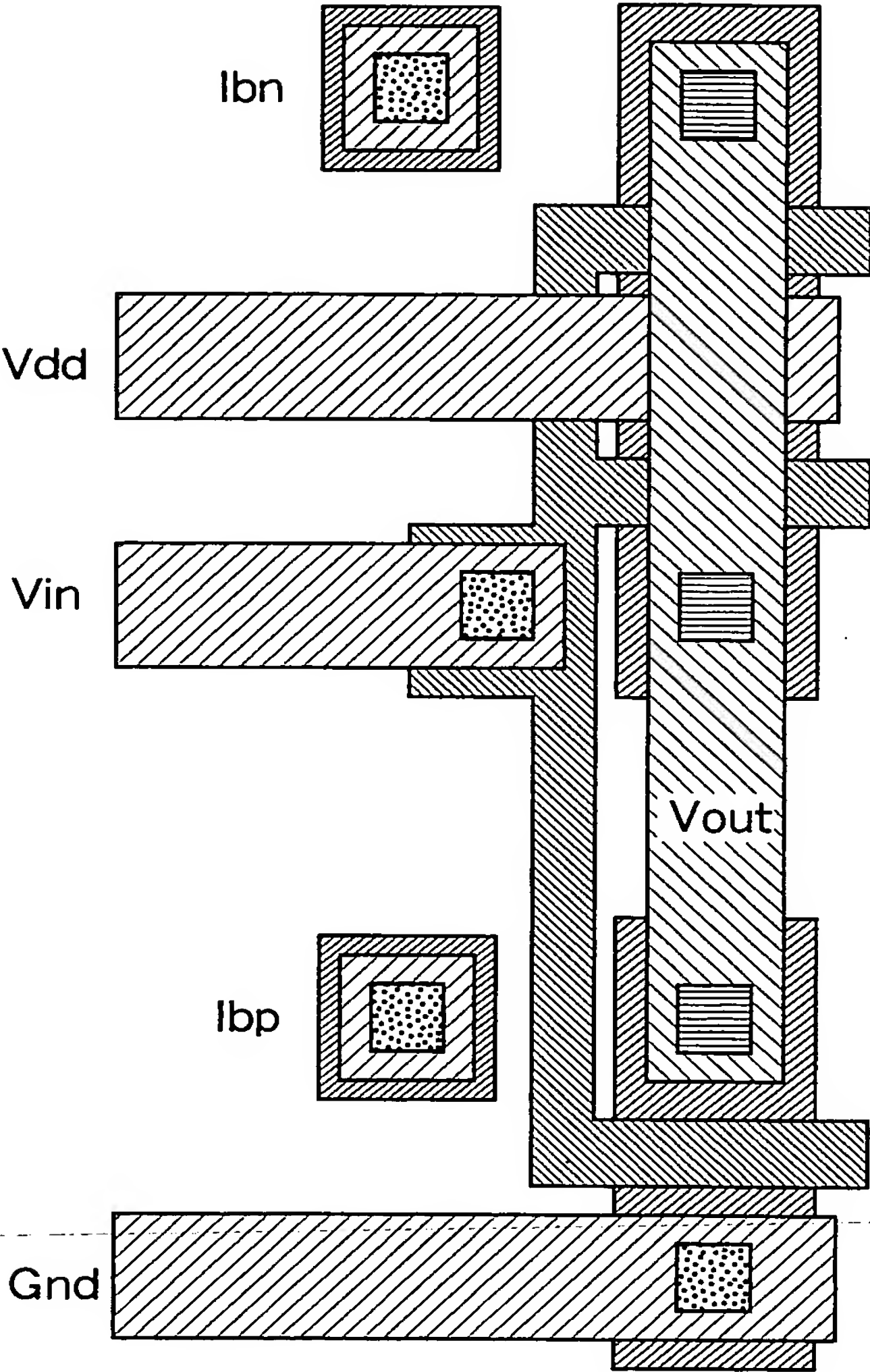


Fig.6

WAVEFORM OF INPUT VOLTAGE AND CURRENT PULSE

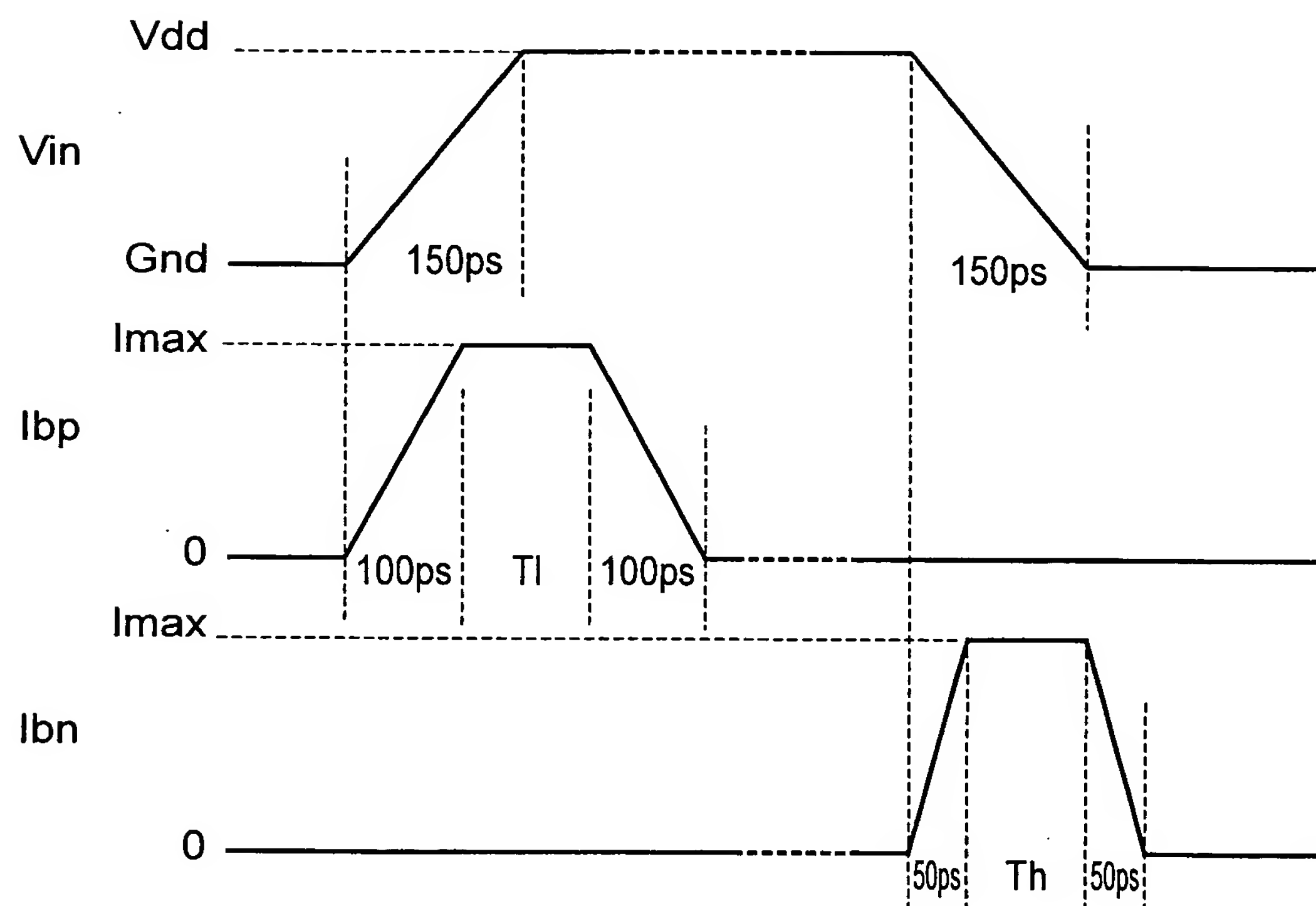


Fig.7

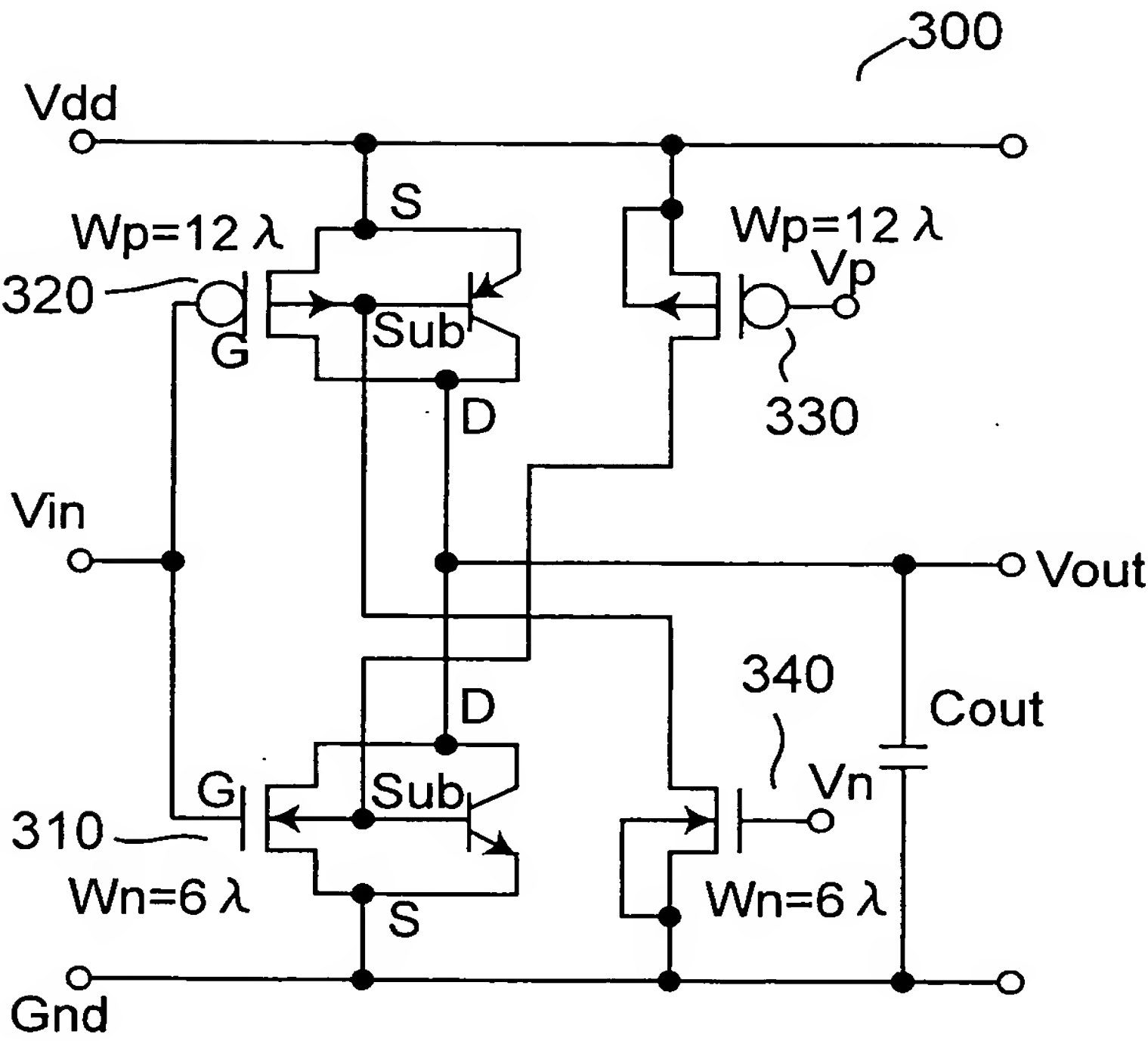


Fig. 8

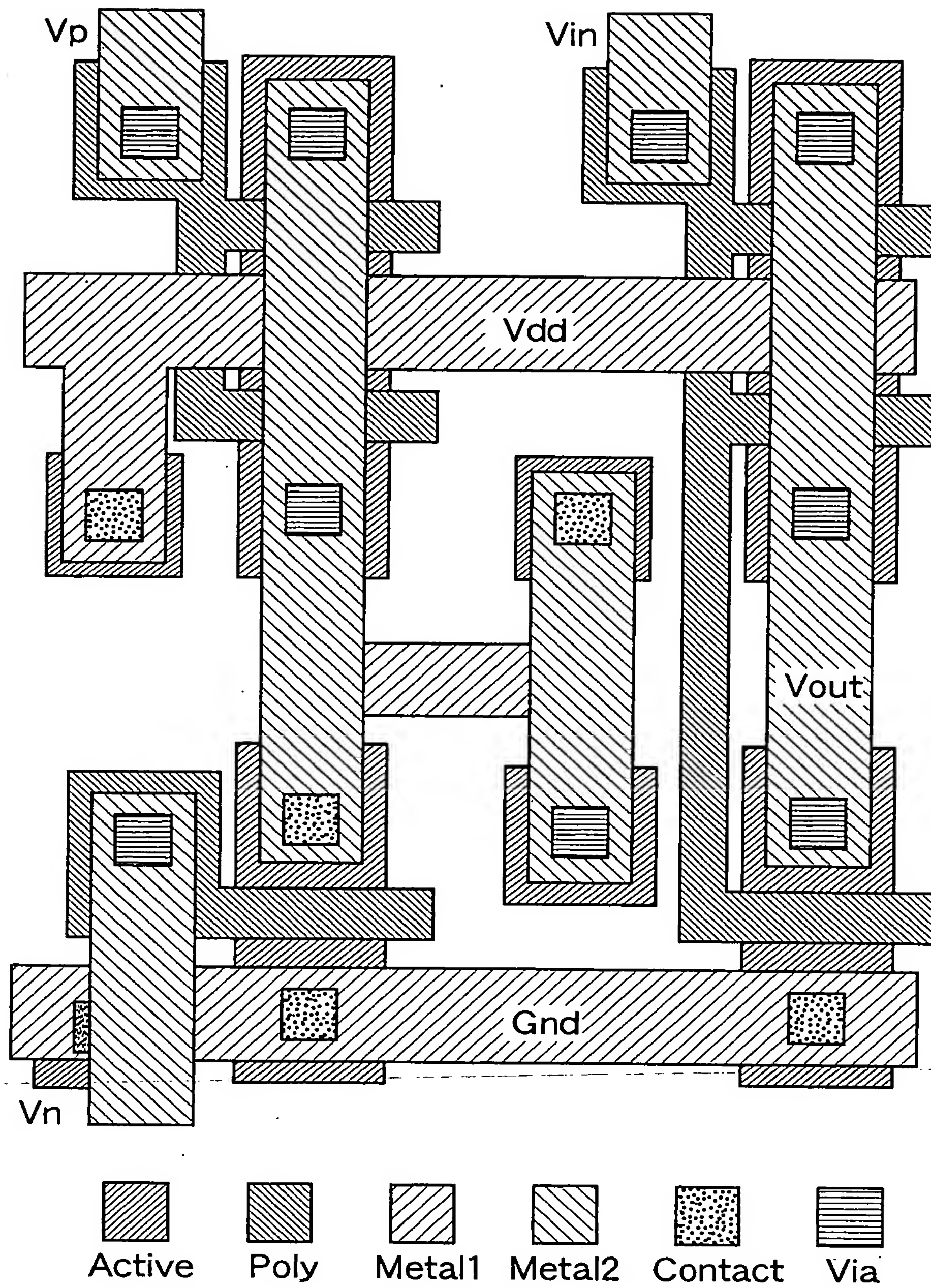


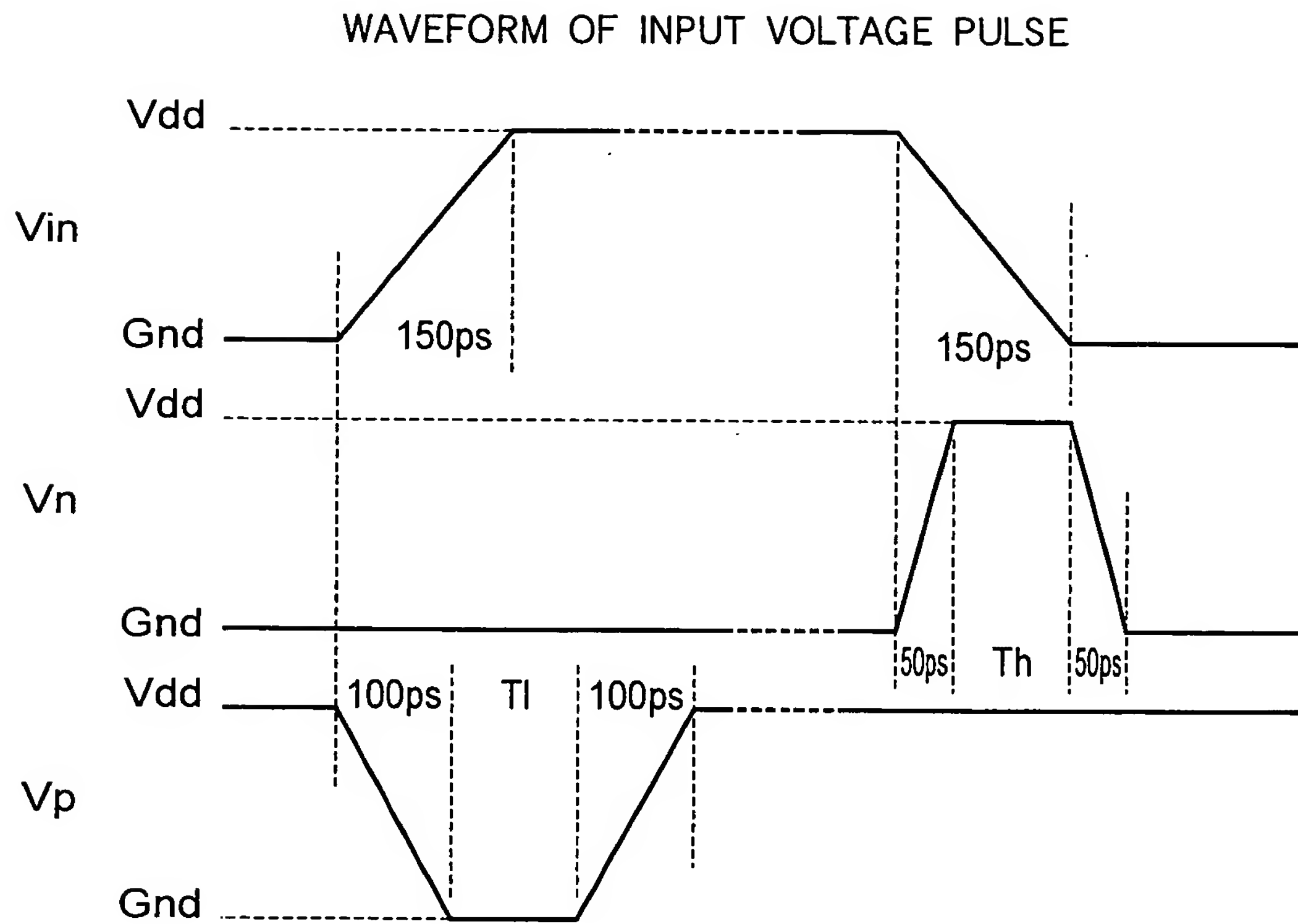
Fig.9

Fig. 10

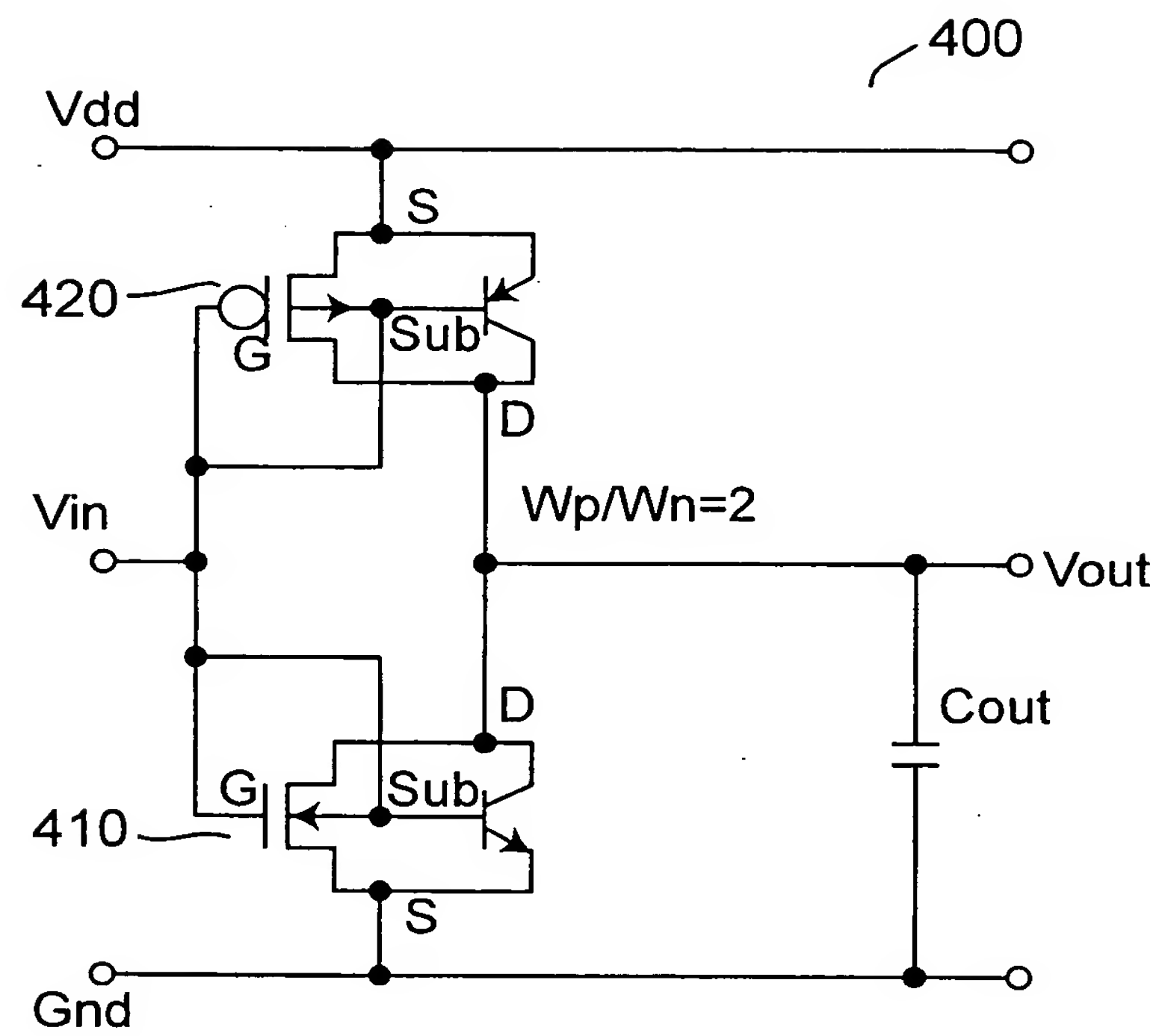


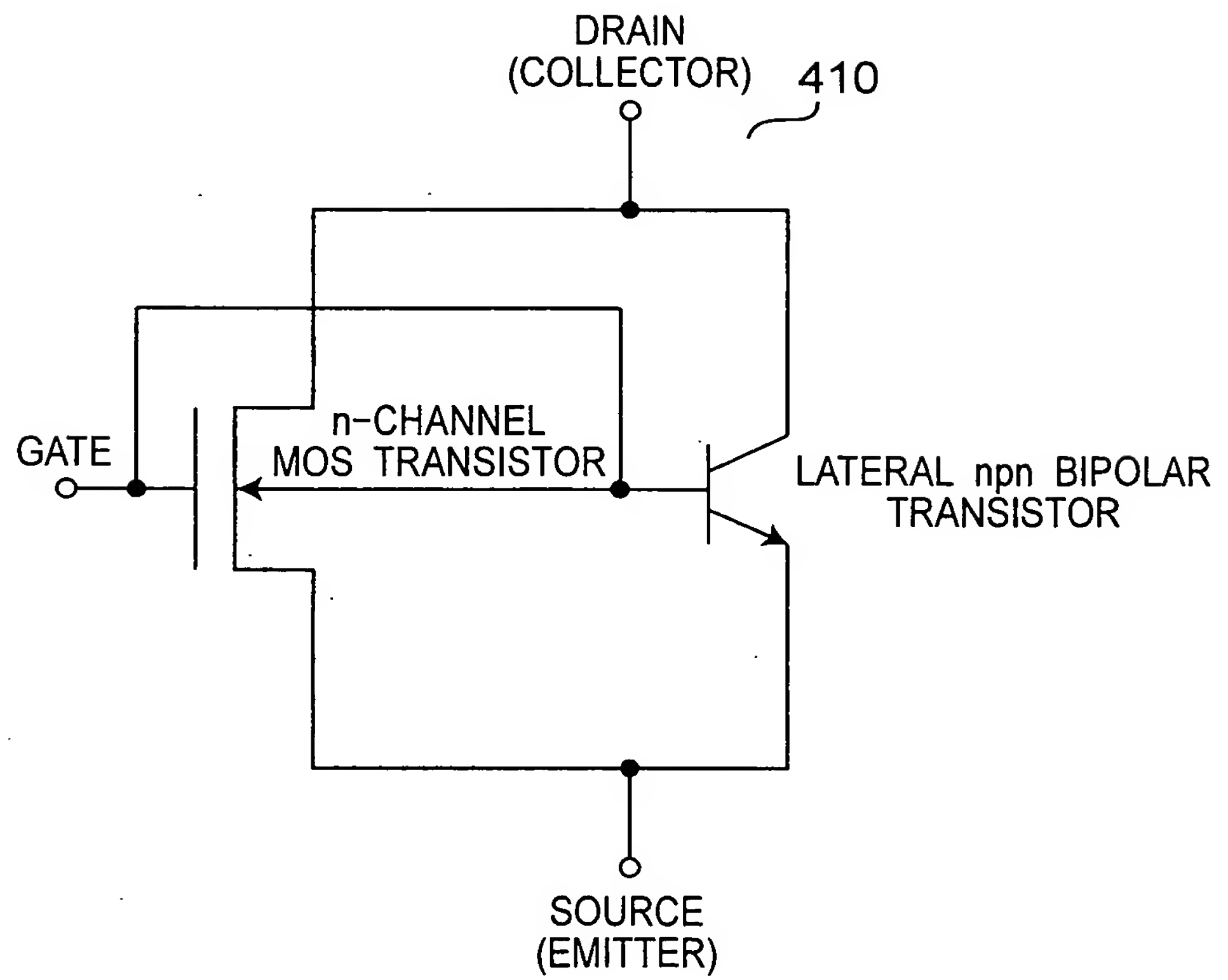
Fig. 11

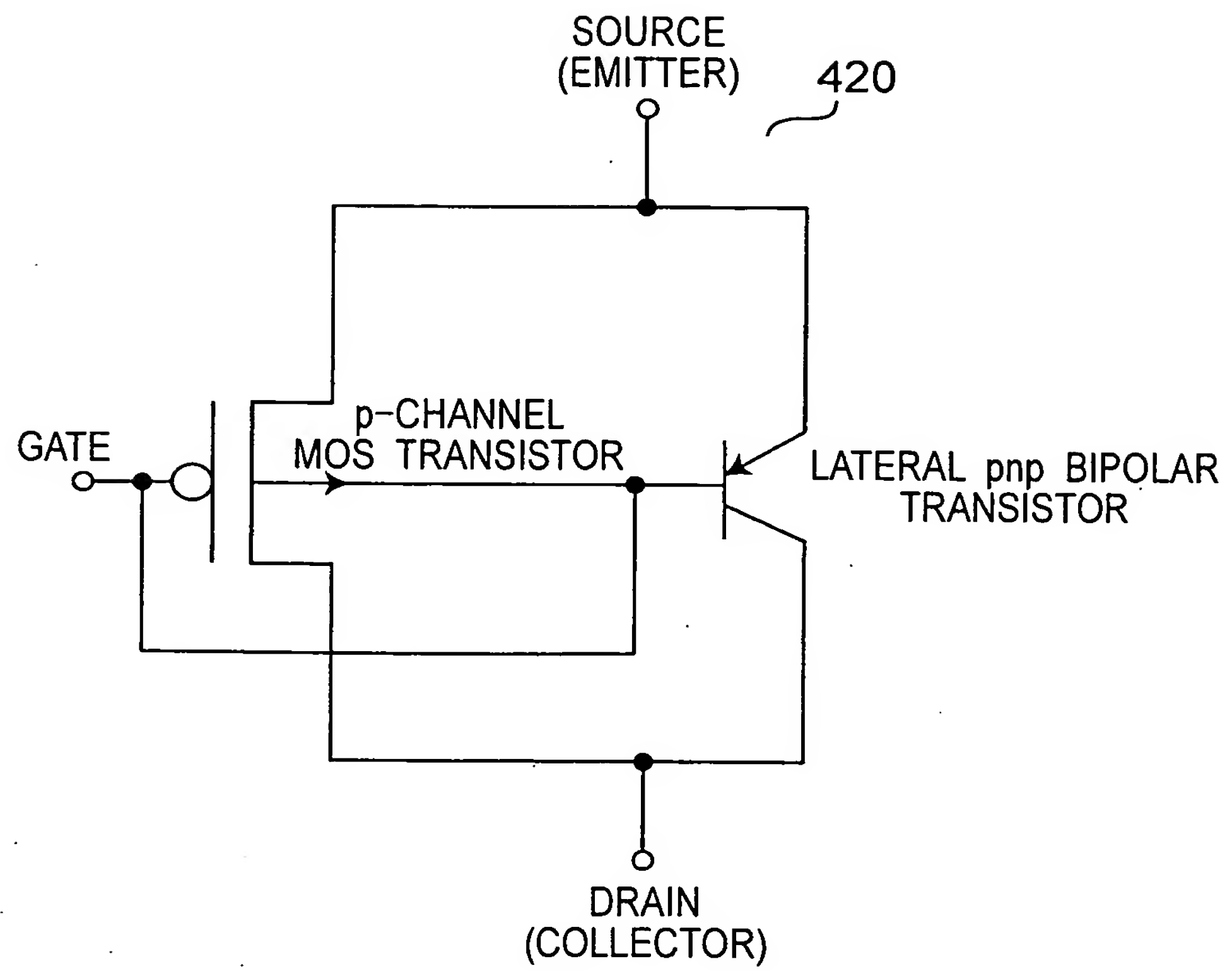
Fig. 12

Fig. 13

WAVEFORM OF INPUT VOLTAGE PULSE

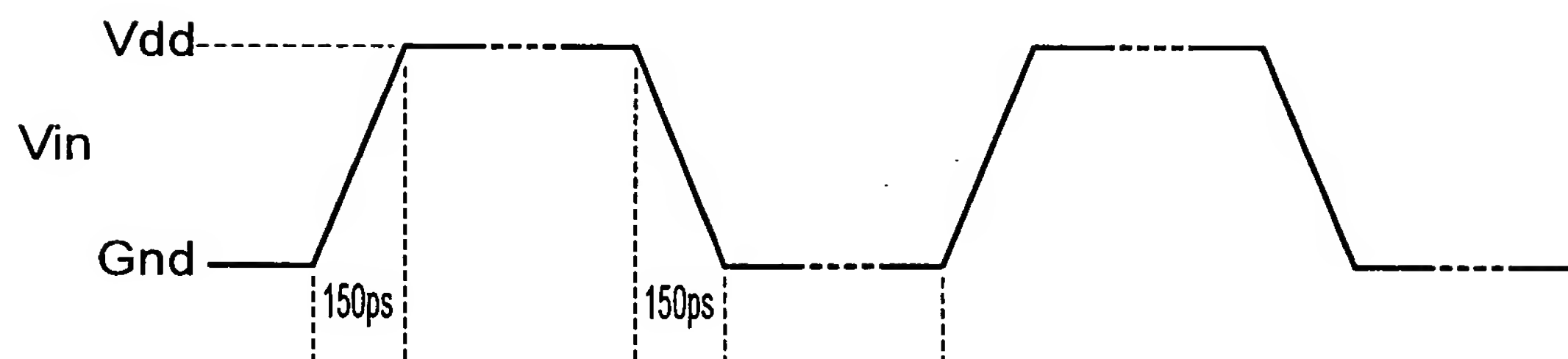


Fig. 14

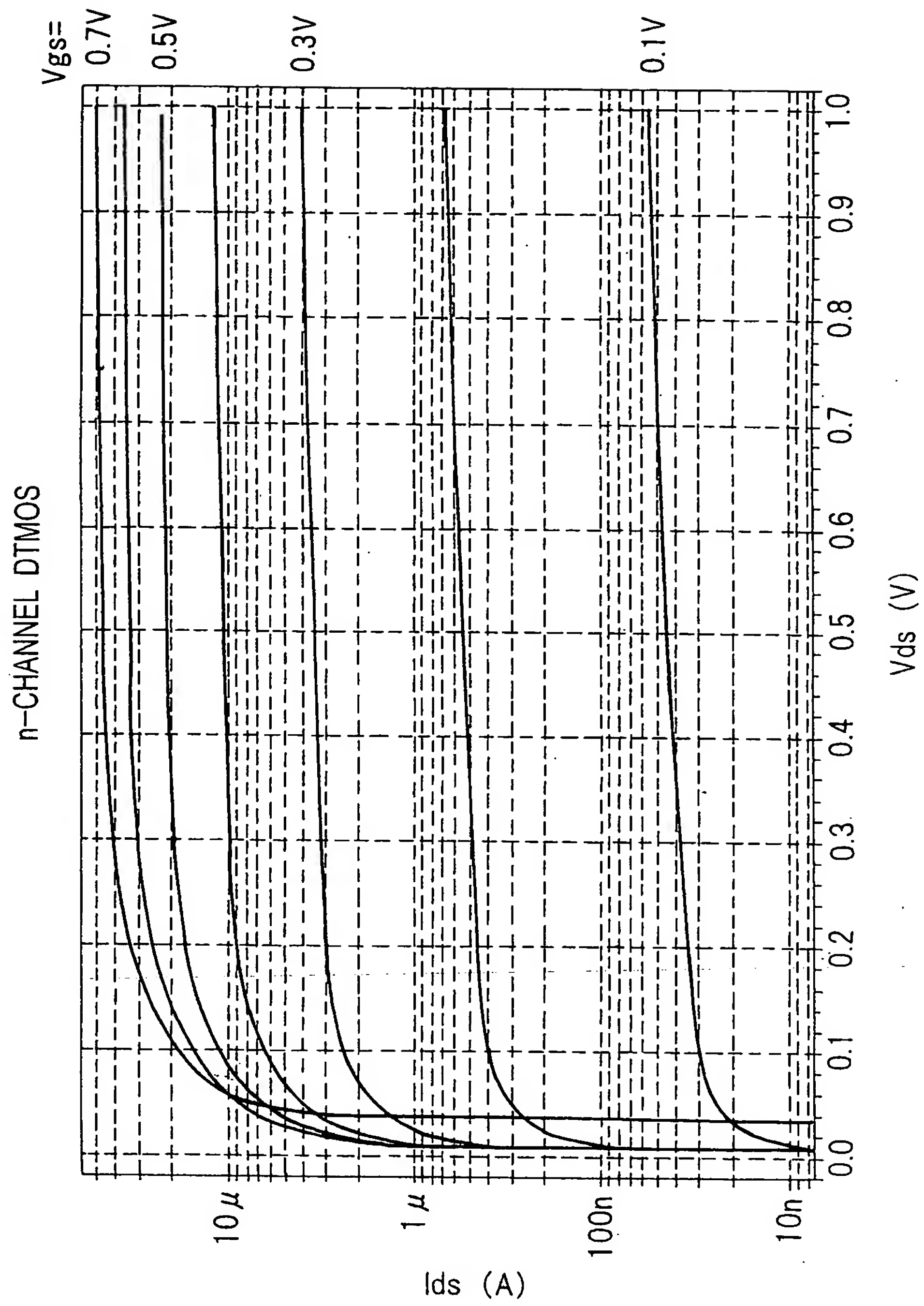


Fig. 15

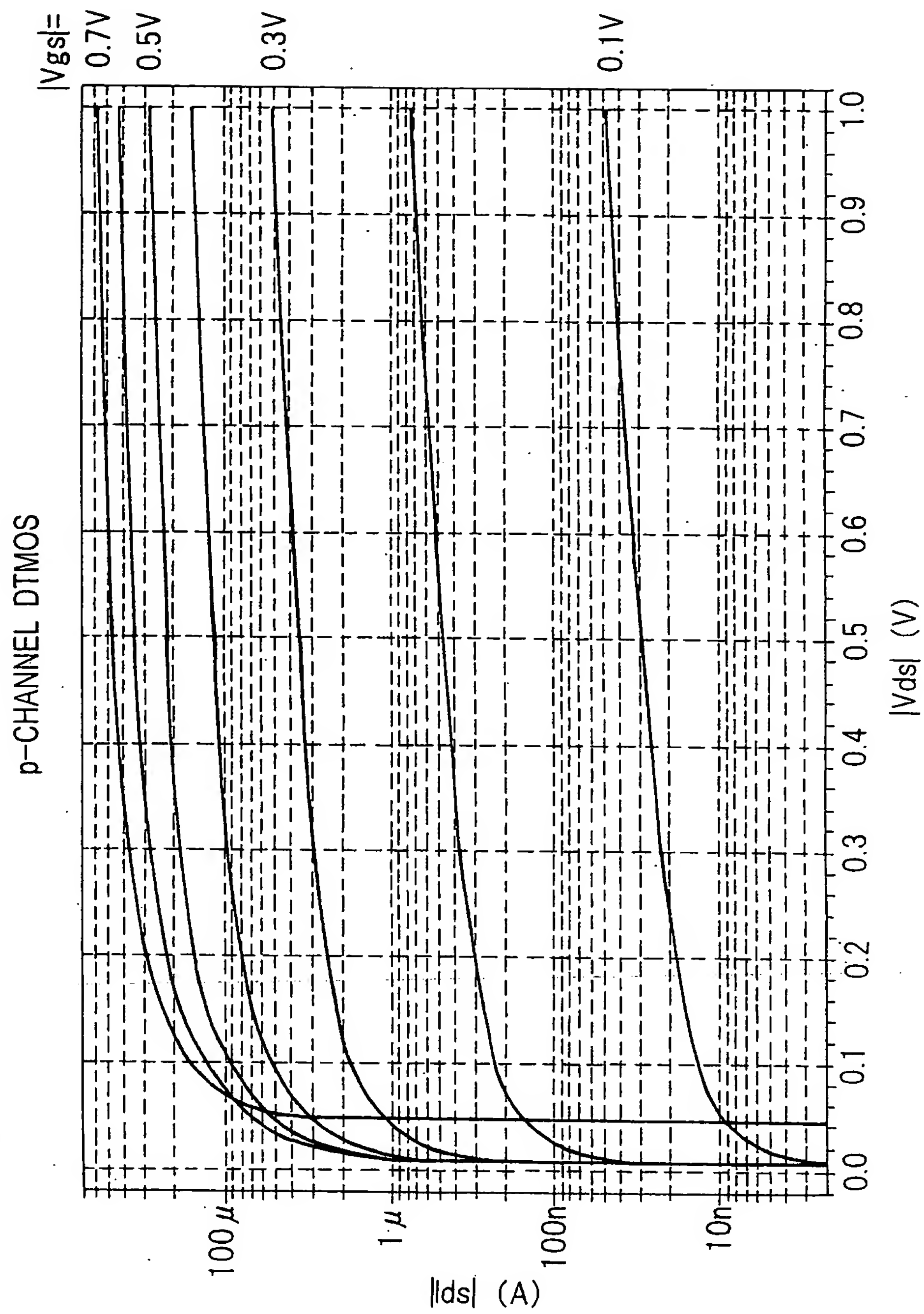


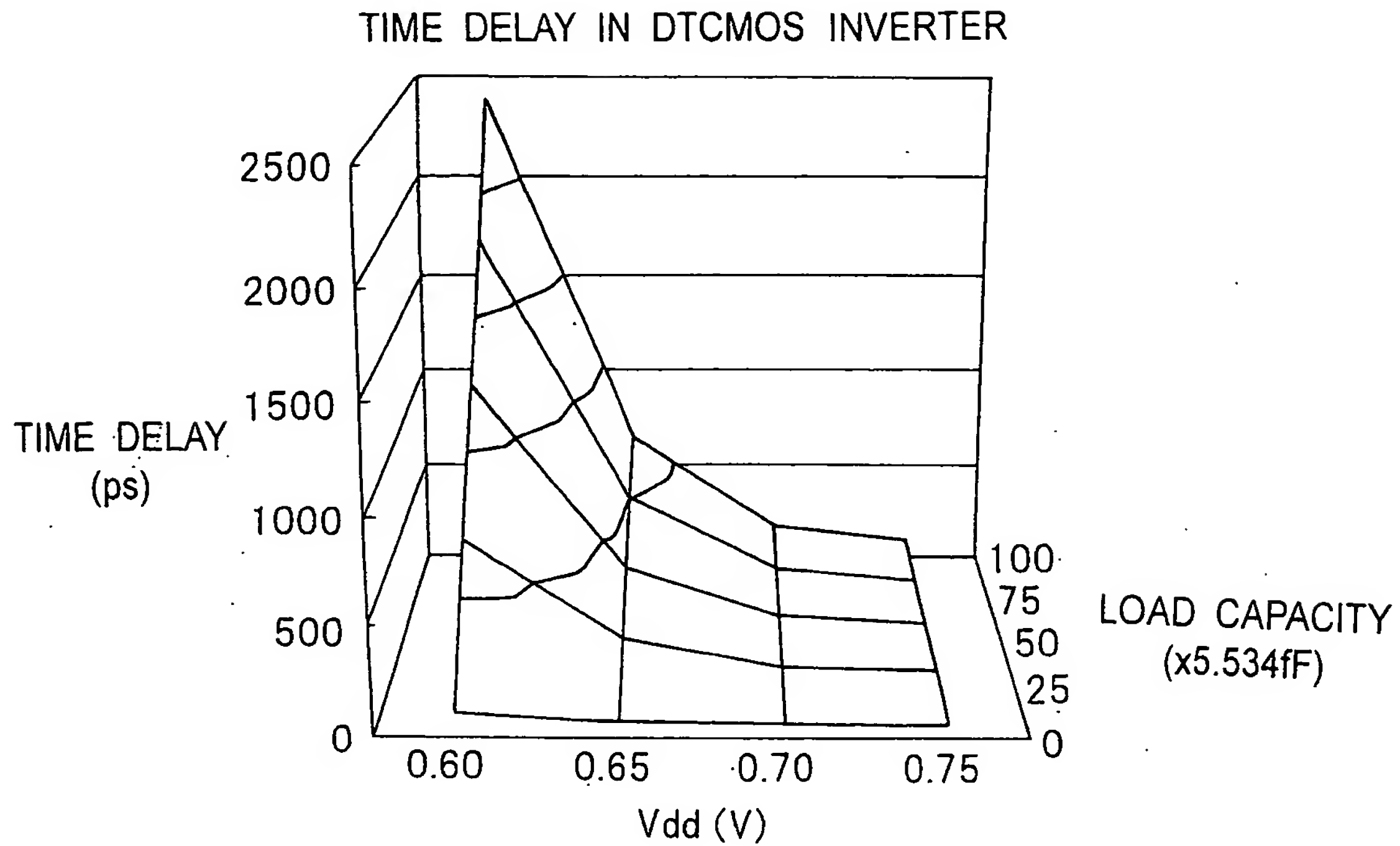
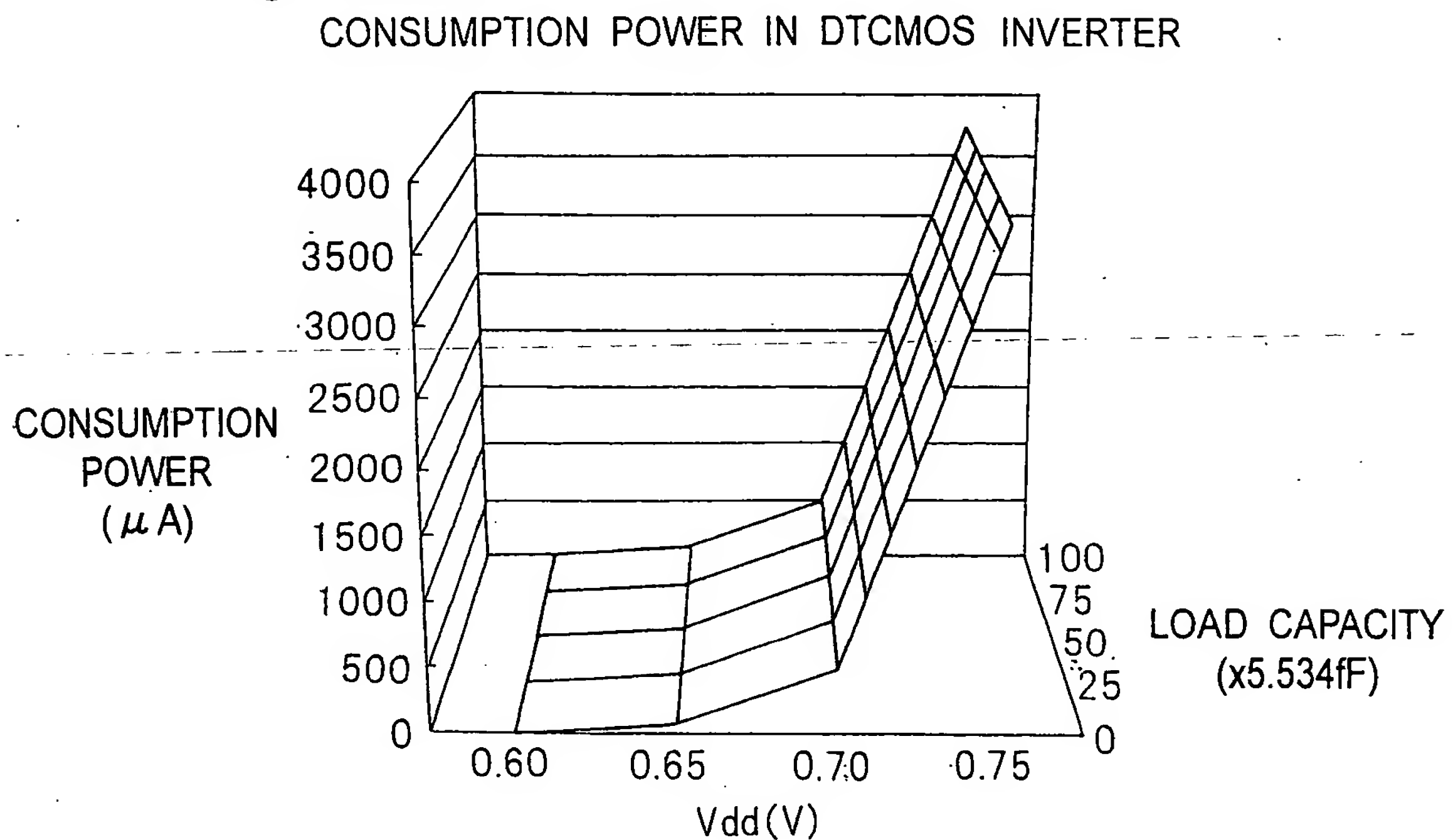
Fig. 16A*Fig. 16B*

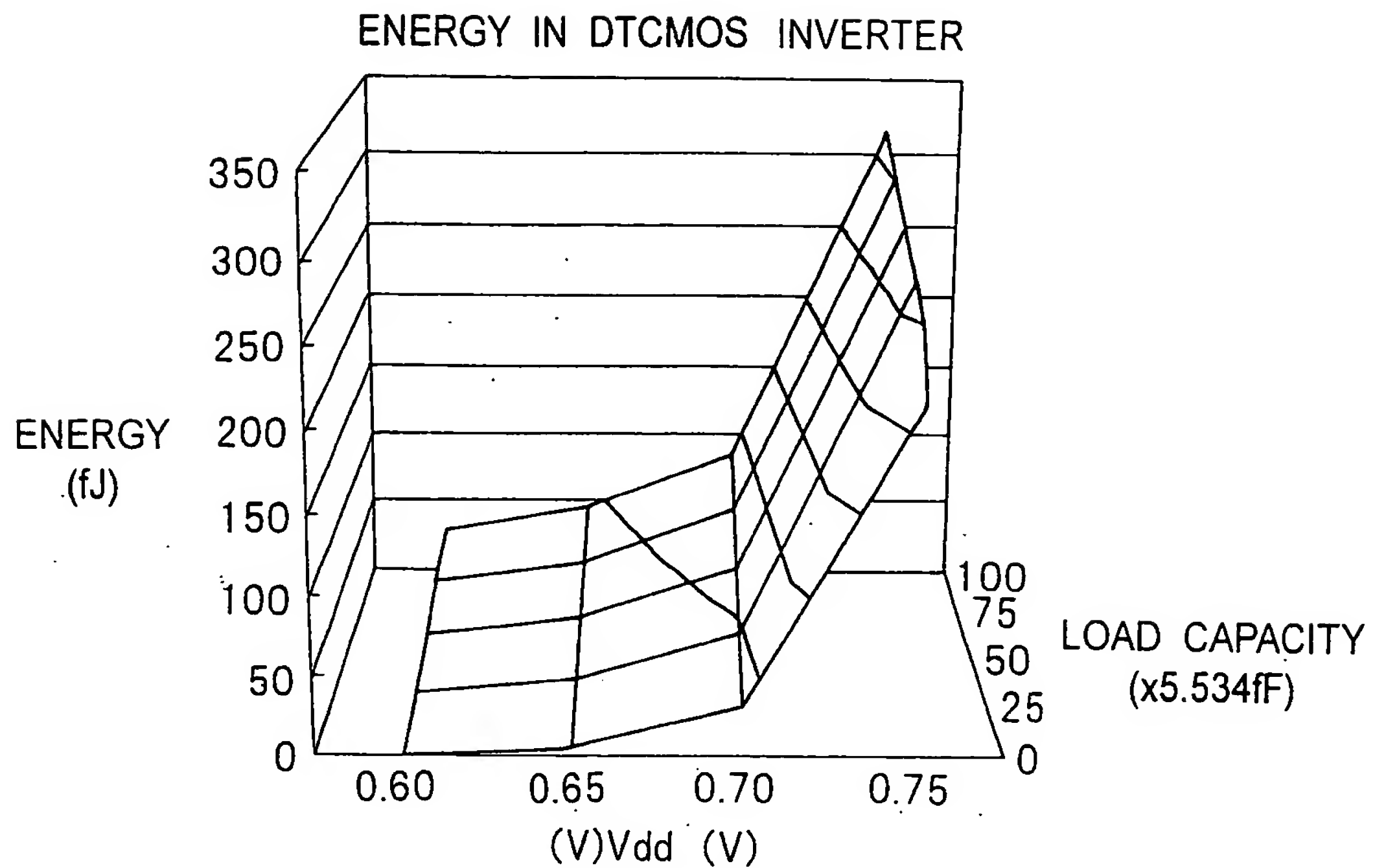
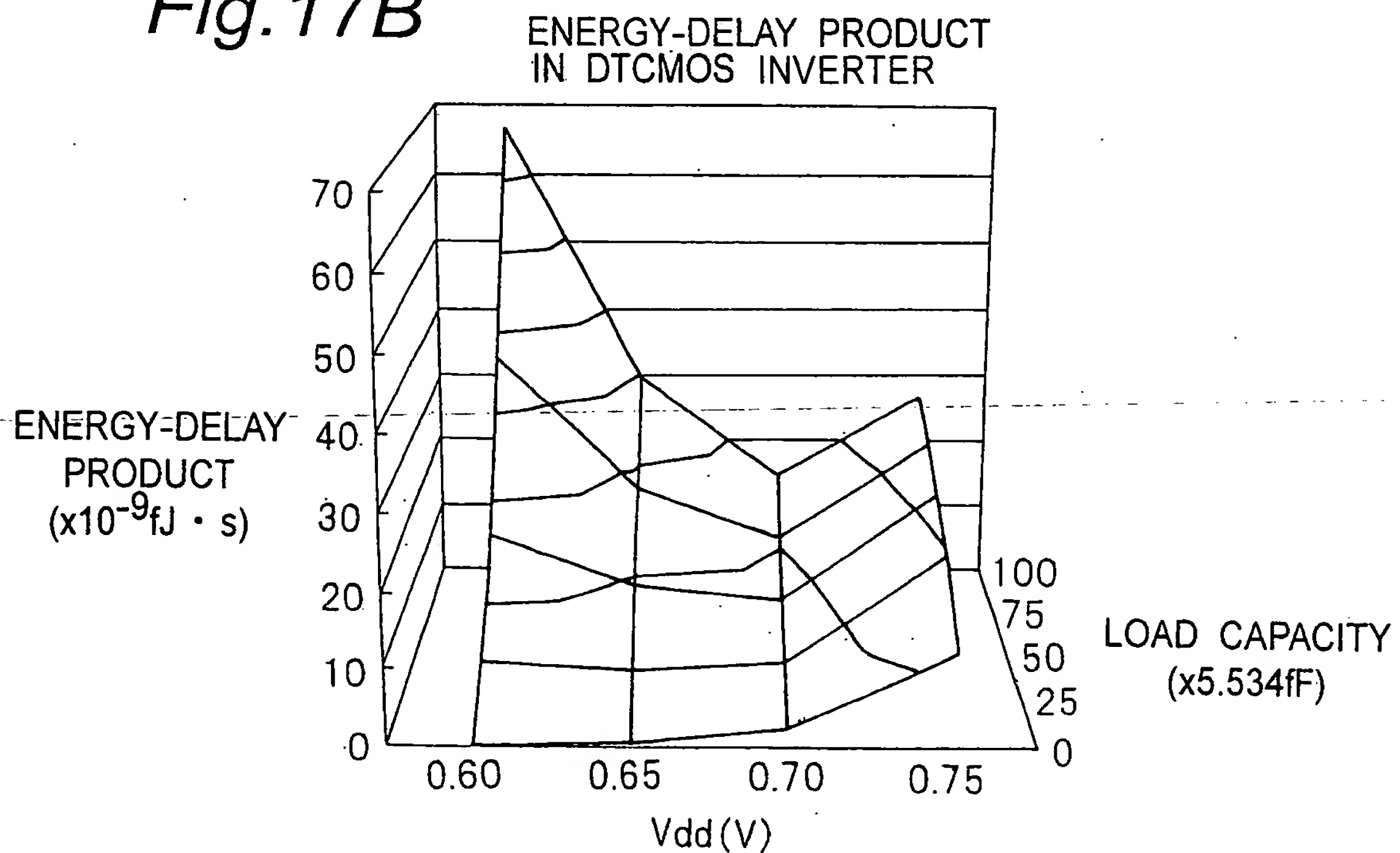
Fig. 17A*Fig. 17B*

Fig.18

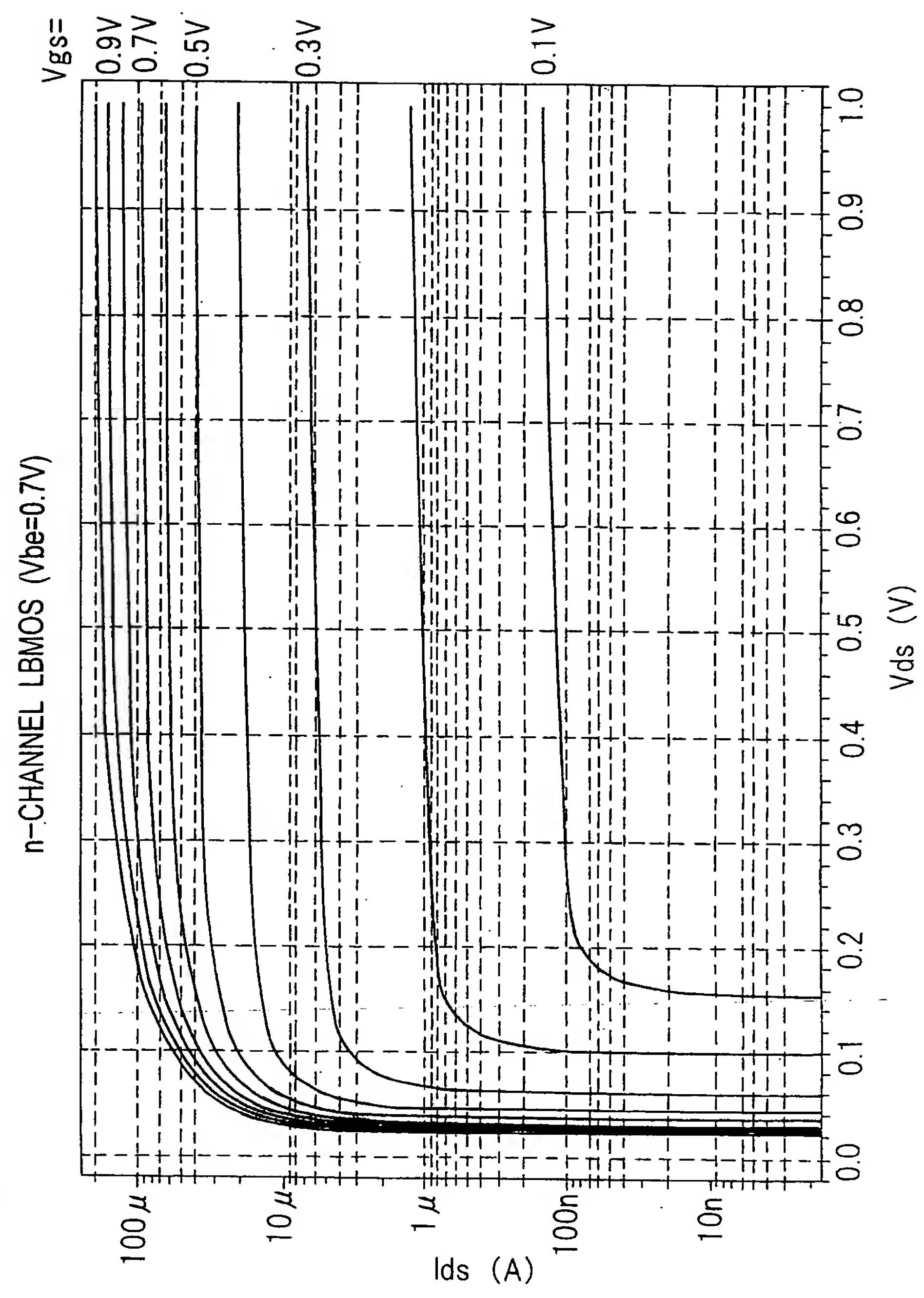
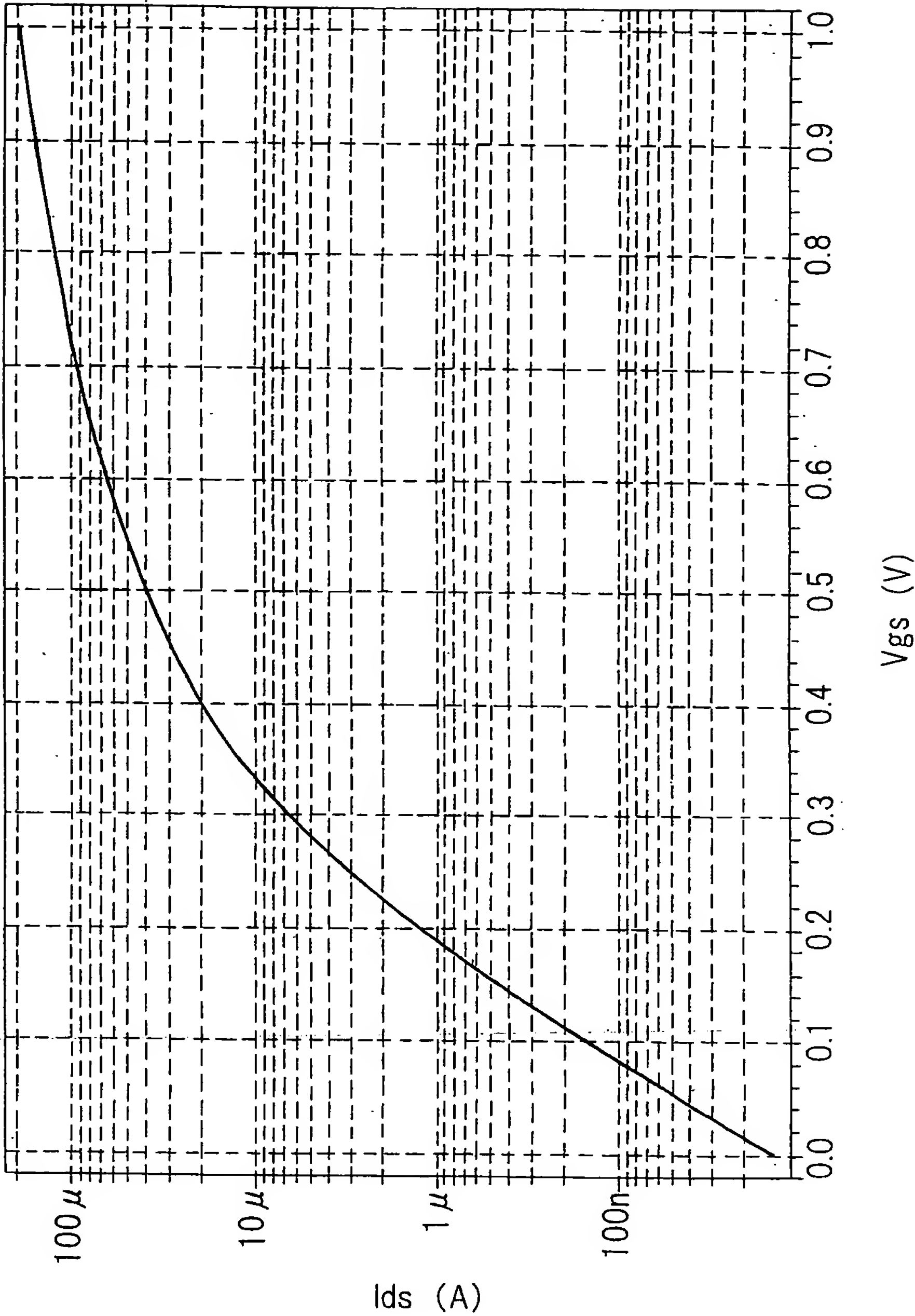


Fig.19

n-CHANNEL LBMOS ($V_{be}=0.7V$. $V_{ds}=1.0V$)



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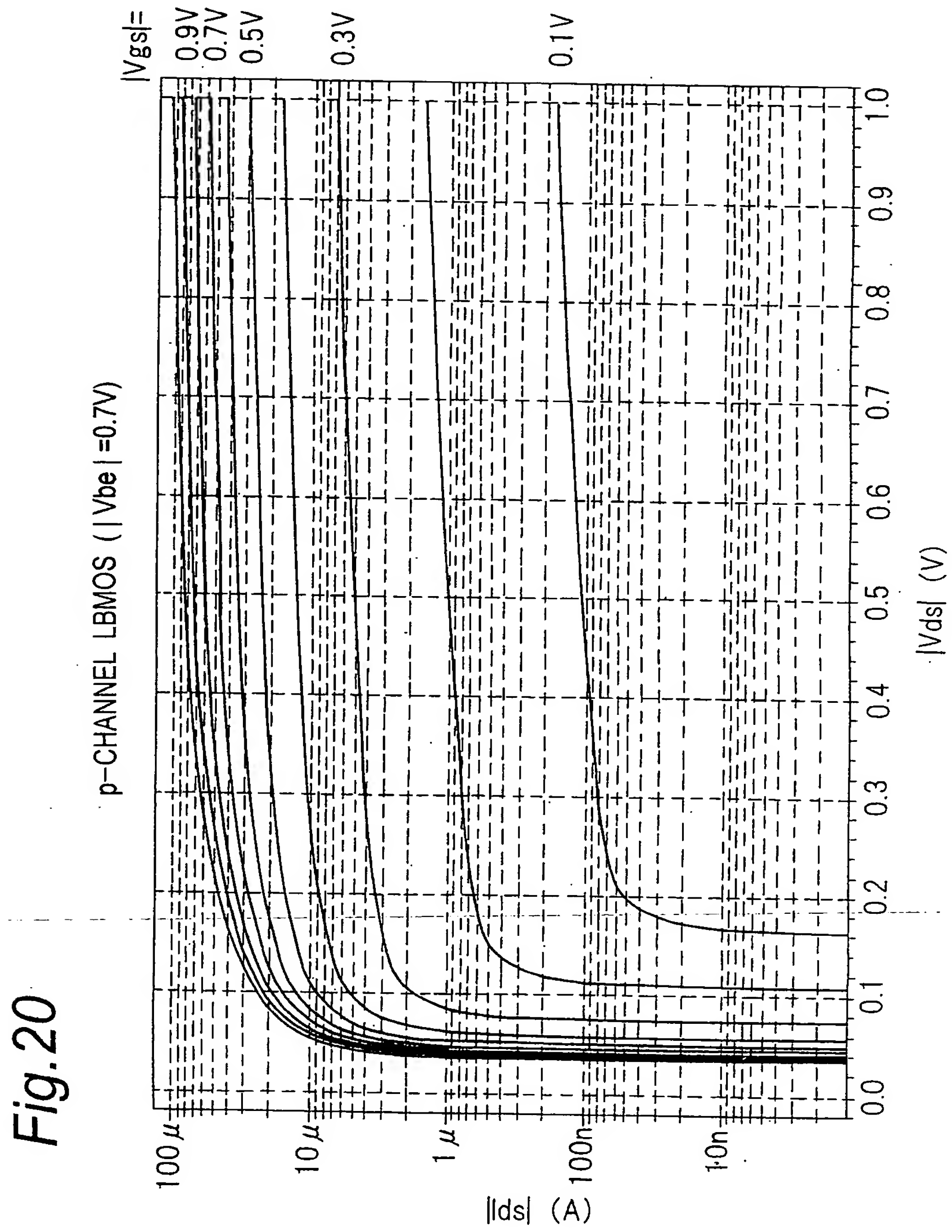


Fig. 21

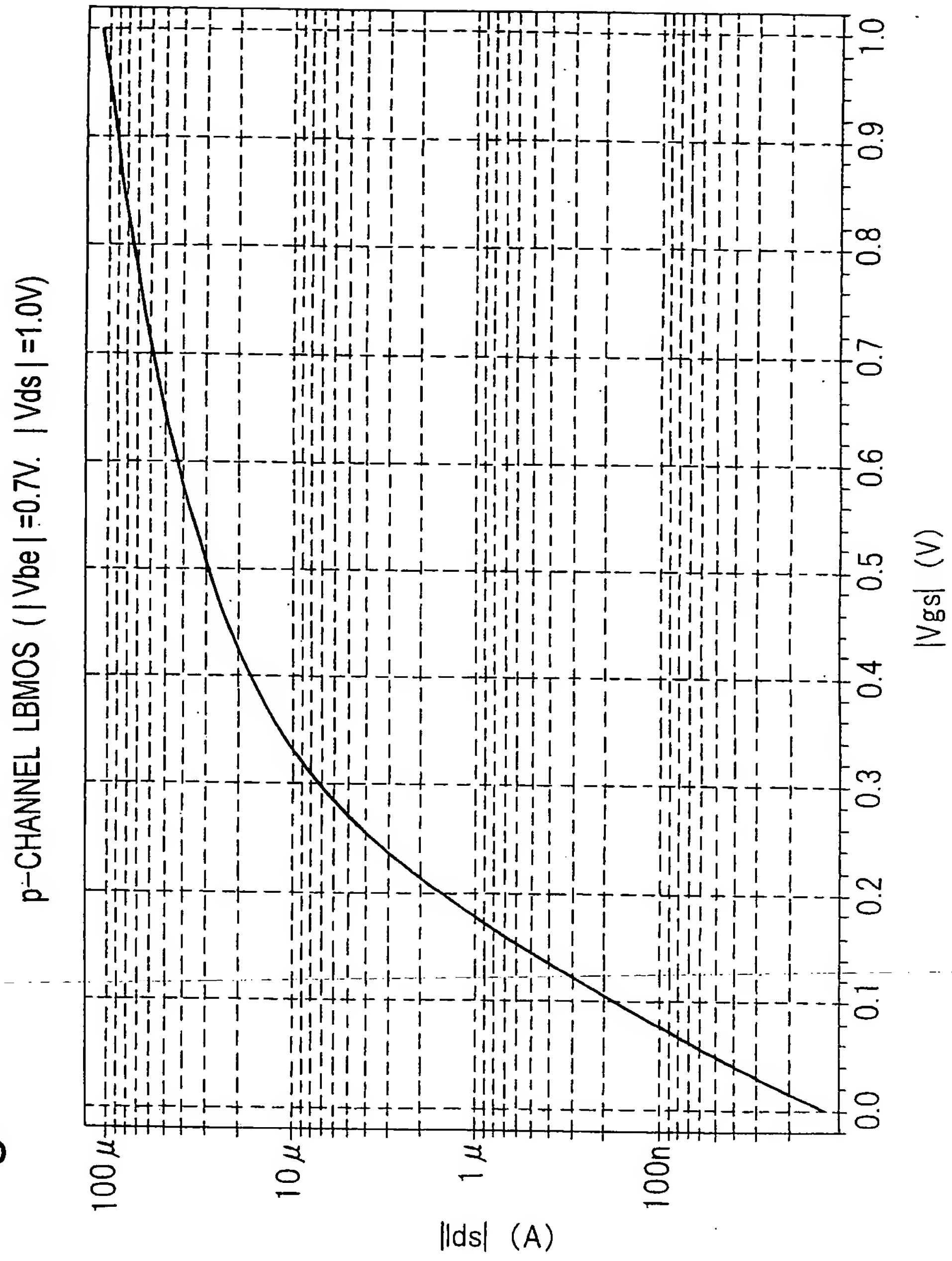
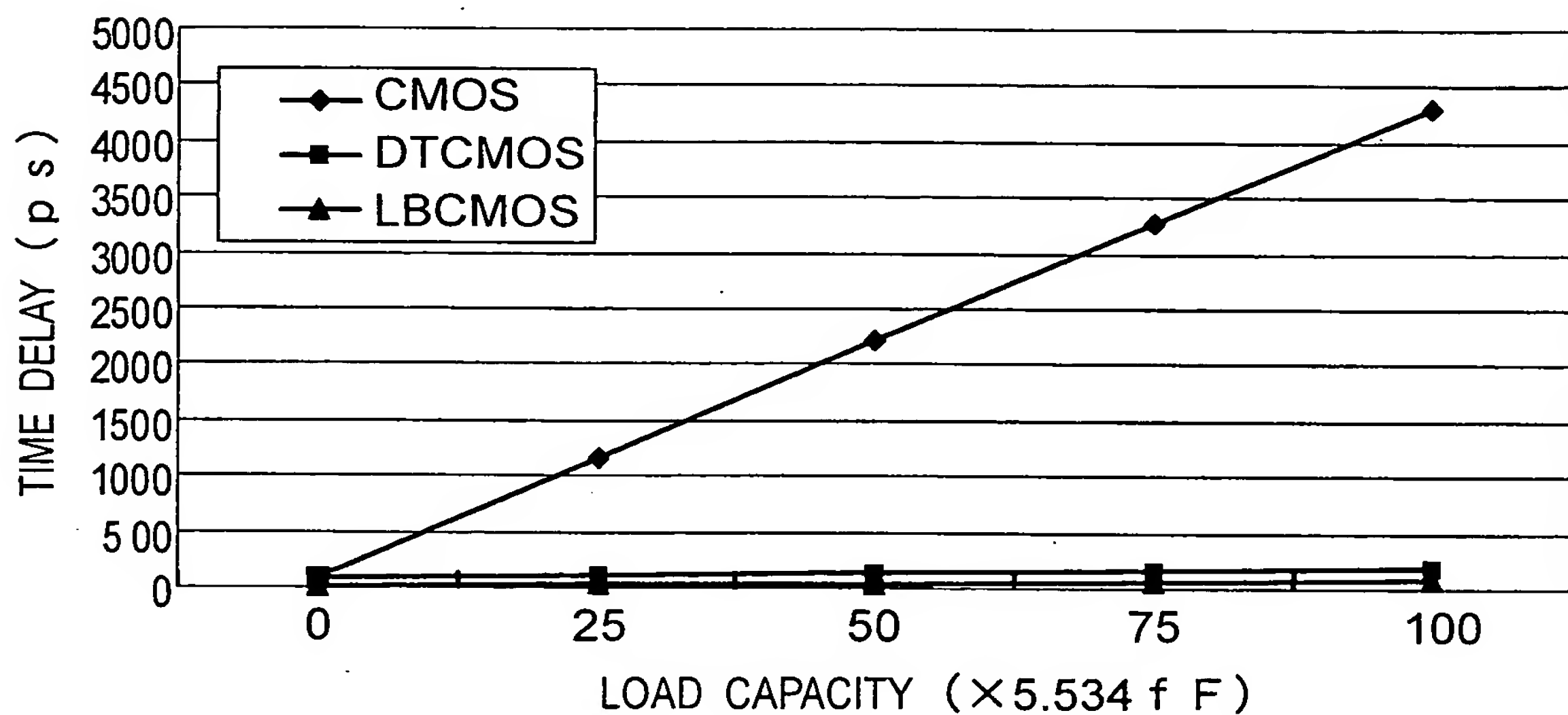


Fig.22A

TIME DELAY IN LBCMOS INVERTER DUE TO CURRENT SOURCE
($V_{dd}=0.7V$, $I_{max}=75\mu A$, $T_h=100ps$)

*Fig.22B*

CONSUMPTION POWER IN LBCMOS INVERTER DUE TO CURRENT SOURCE
($V_{dd}=0.7V$, $I_{max}=75\mu A$, $T_h=100ps$)

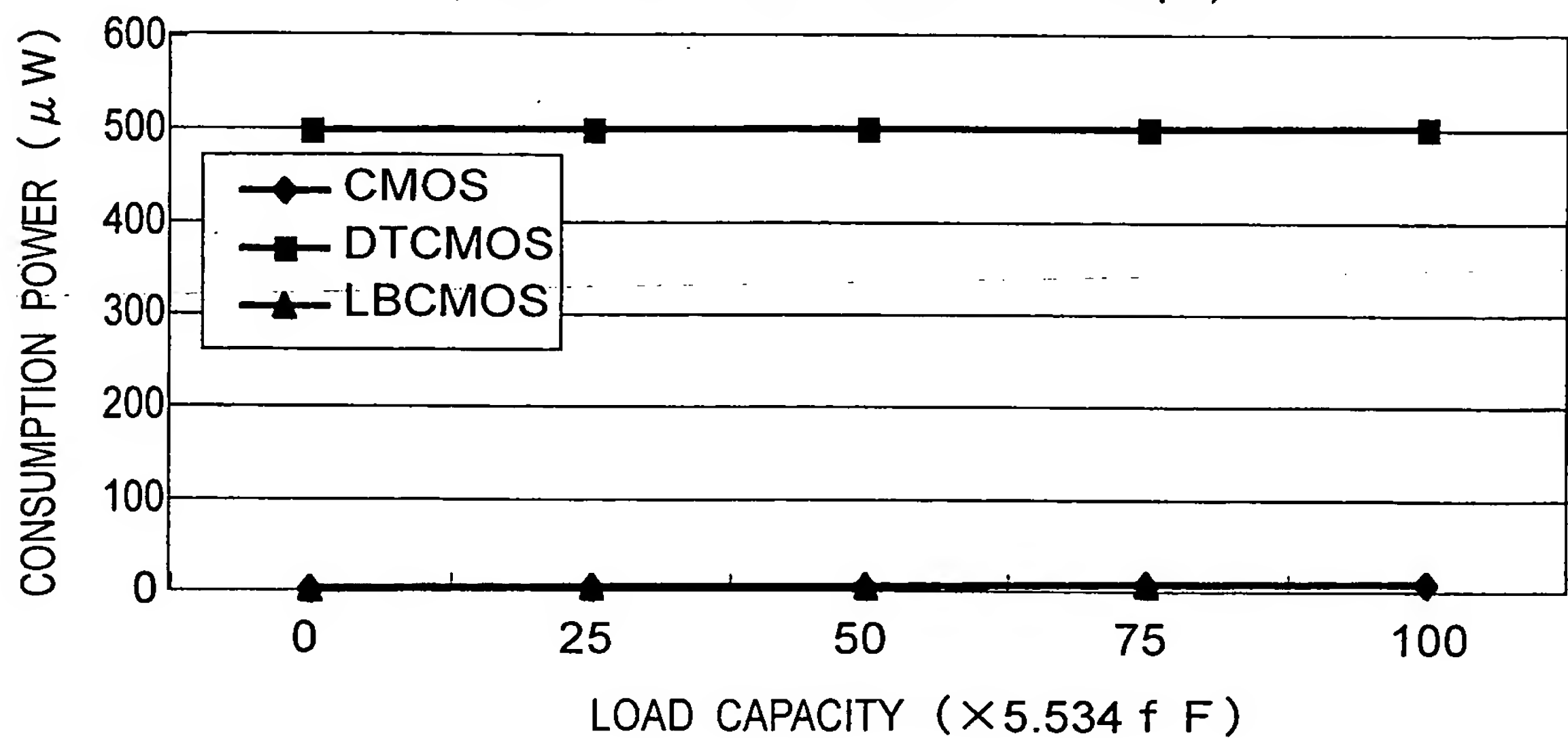
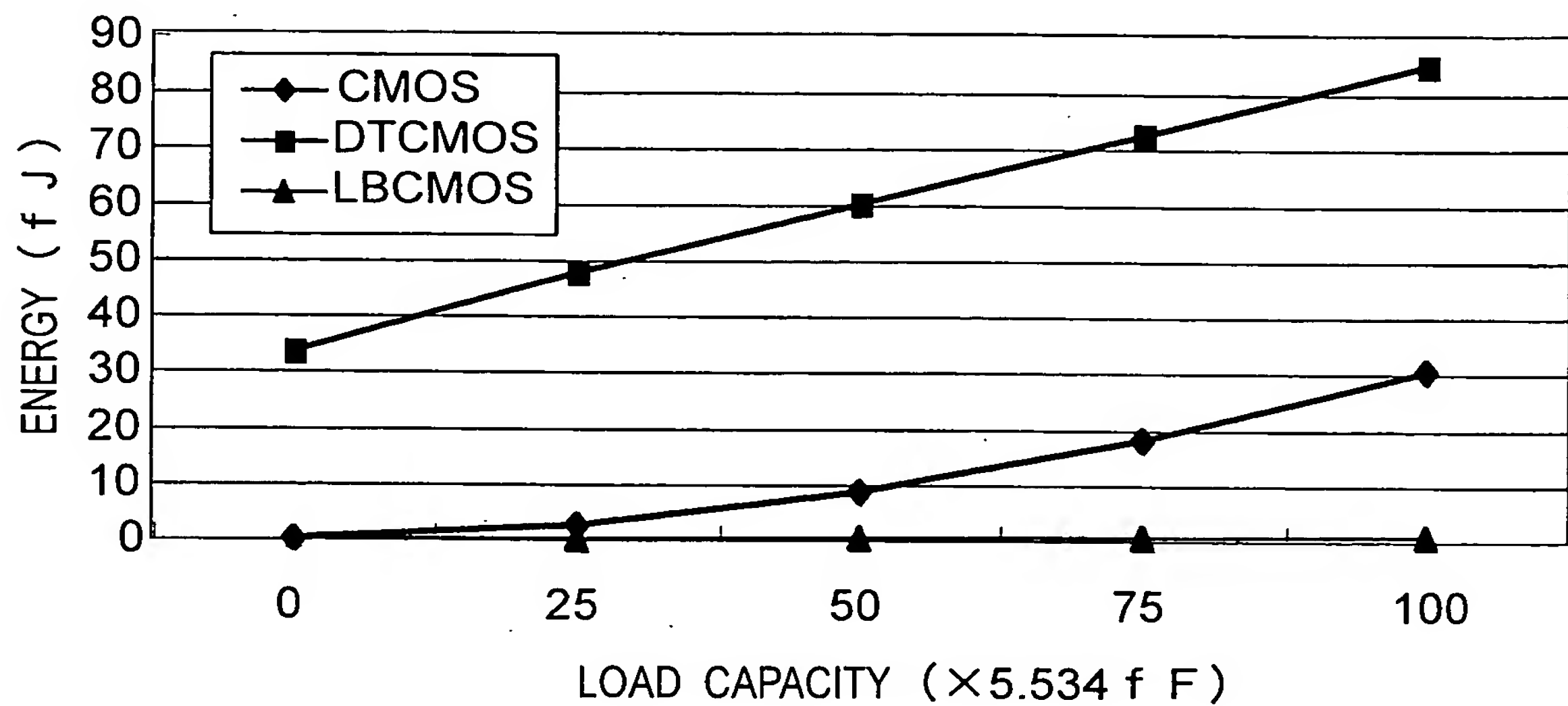


Fig.23A

ENERGY IN LBCMOS INVERTER DUE TO CURRENT SOURCE
($V_{dd}=0.7V$, $I_{max}=75\mu A$, $T_h=100ps$)

*Fig.23B*

ENERGY-DELAY PRODUCT IN LBCMOS INVERTER DUE TO CURRENT SOURCE
($V_{dd}=0.7V$, $I_{max}=75\mu A$, $T_h=100ps$)

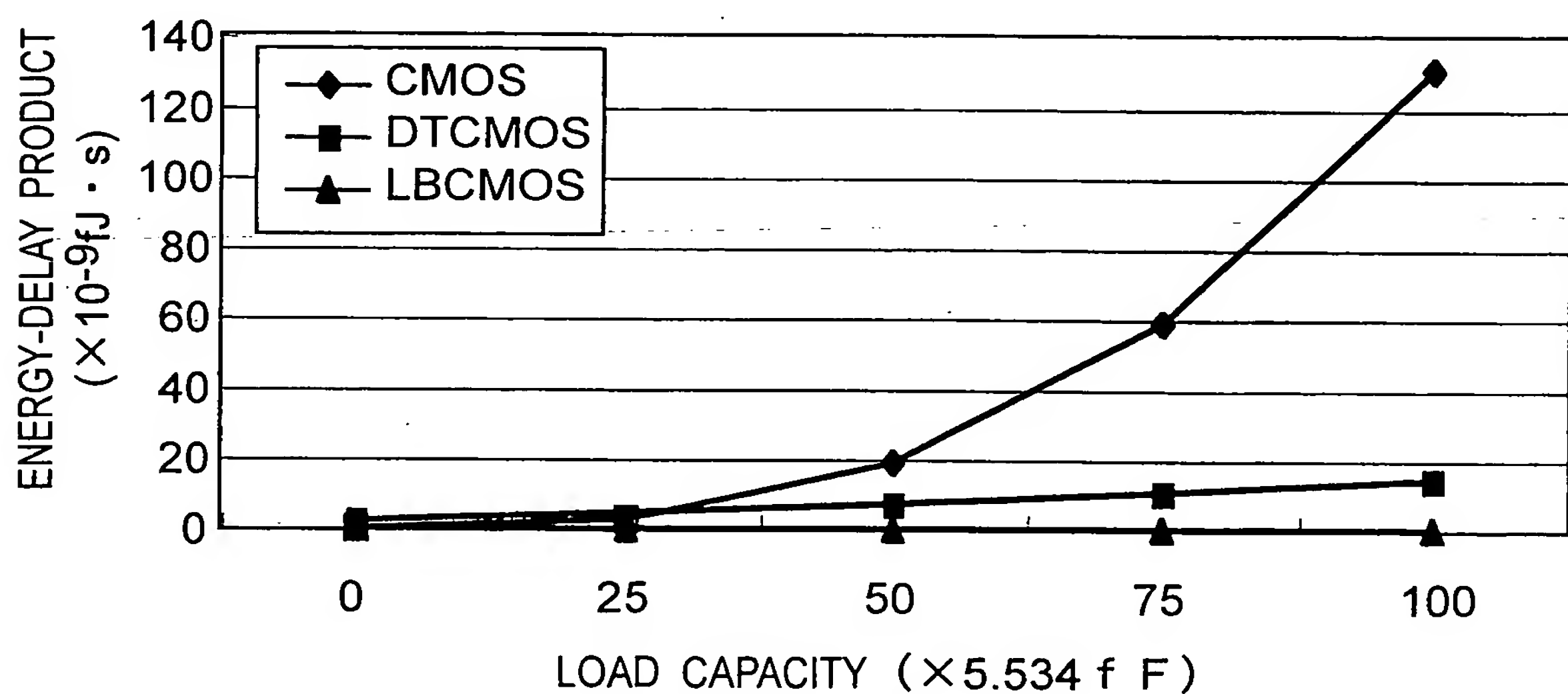


Fig.24A

TIME DELAY IN LBCMOS INVERTER DUE TO CURRENT SOURCE
(Vdd=1.0V, I_{max}=75 μA, Th=100ps)

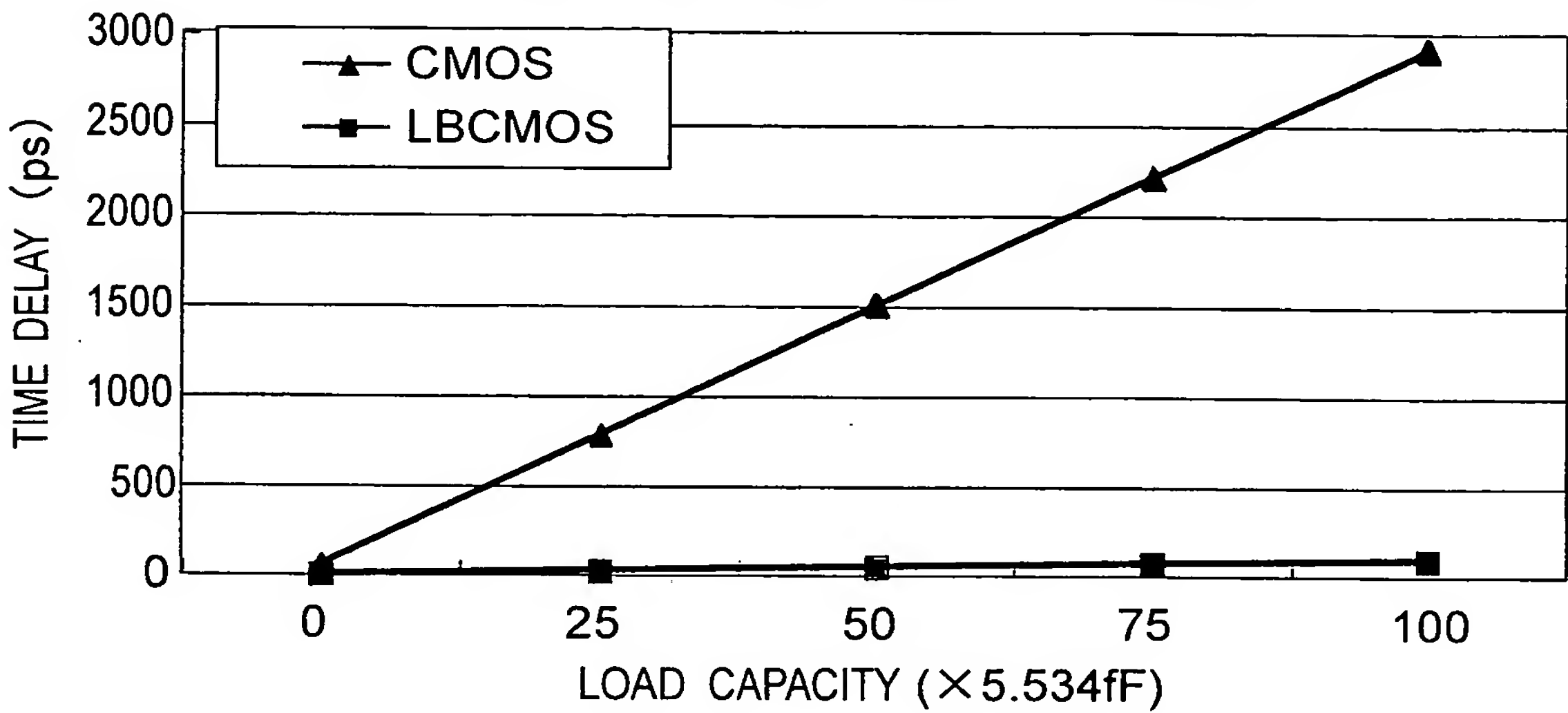


Fig.24B

CONSUMPTION POWER IN LBCMOS INVERTER DUE TO CURRENT SOURCE
(Vdd=1.0V, I_{max}=75 μA, Th=100ps)

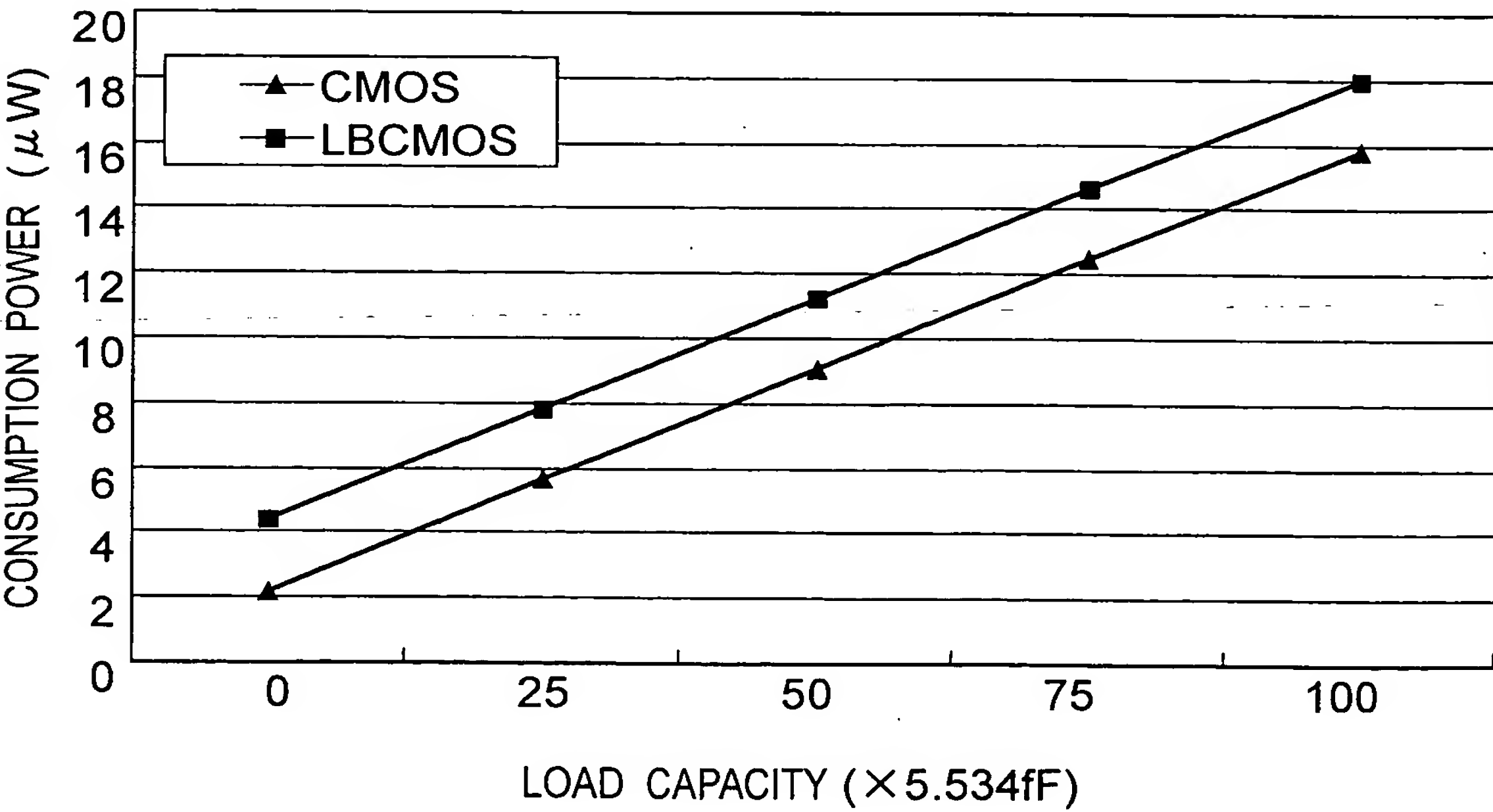
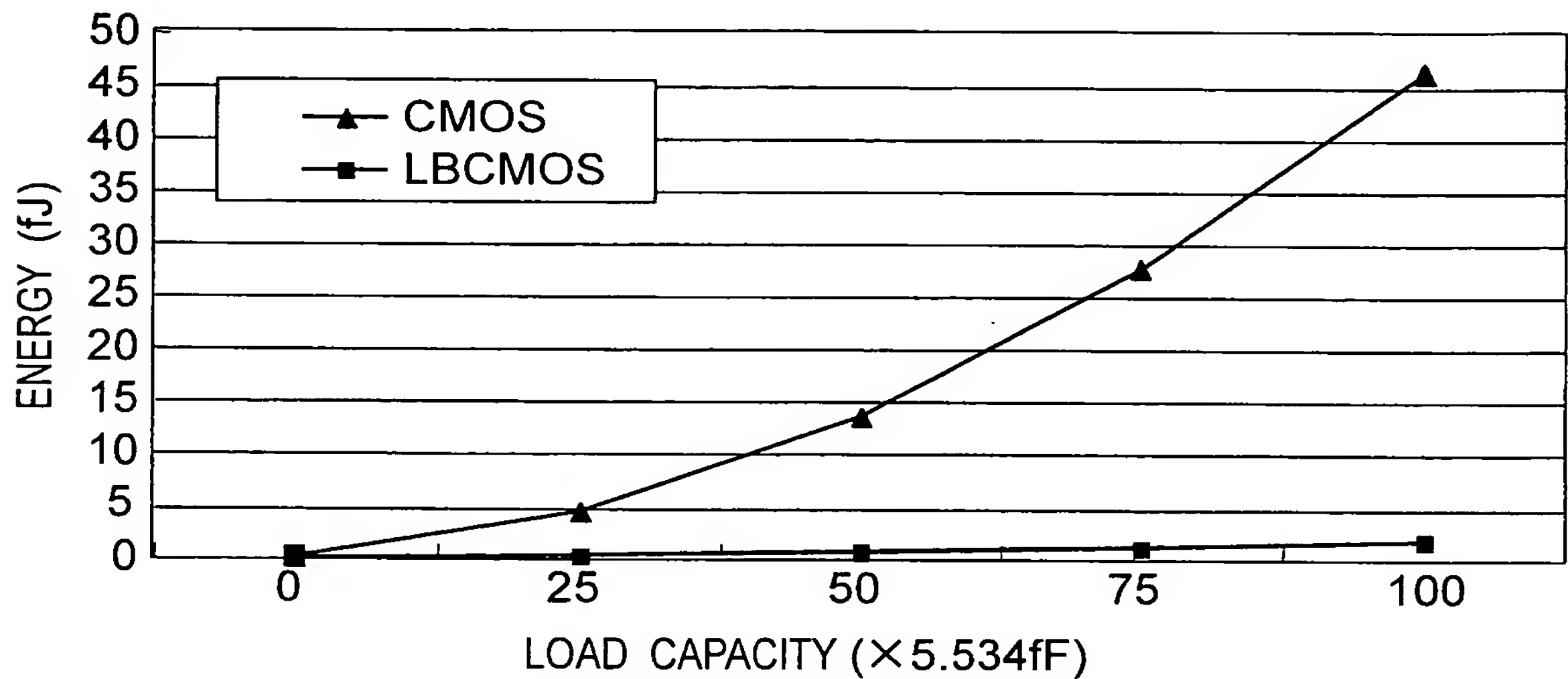


Fig.25A

ENERGY IN LBCMOS INVERTER DUE TO CURRENT SOURCE
($V_{dd}=1.0V$, $I_{max}=75\mu A$, $T_h=100ps$)

**Fig.25B**

ENERGY-DELAY PRODUCT IN LBCMOS INVERTER DUE TO CURRENT SOURCE
($V_{dd}=1.0V$, $I_{max}=75\mu A$, $T_h=100ps$)

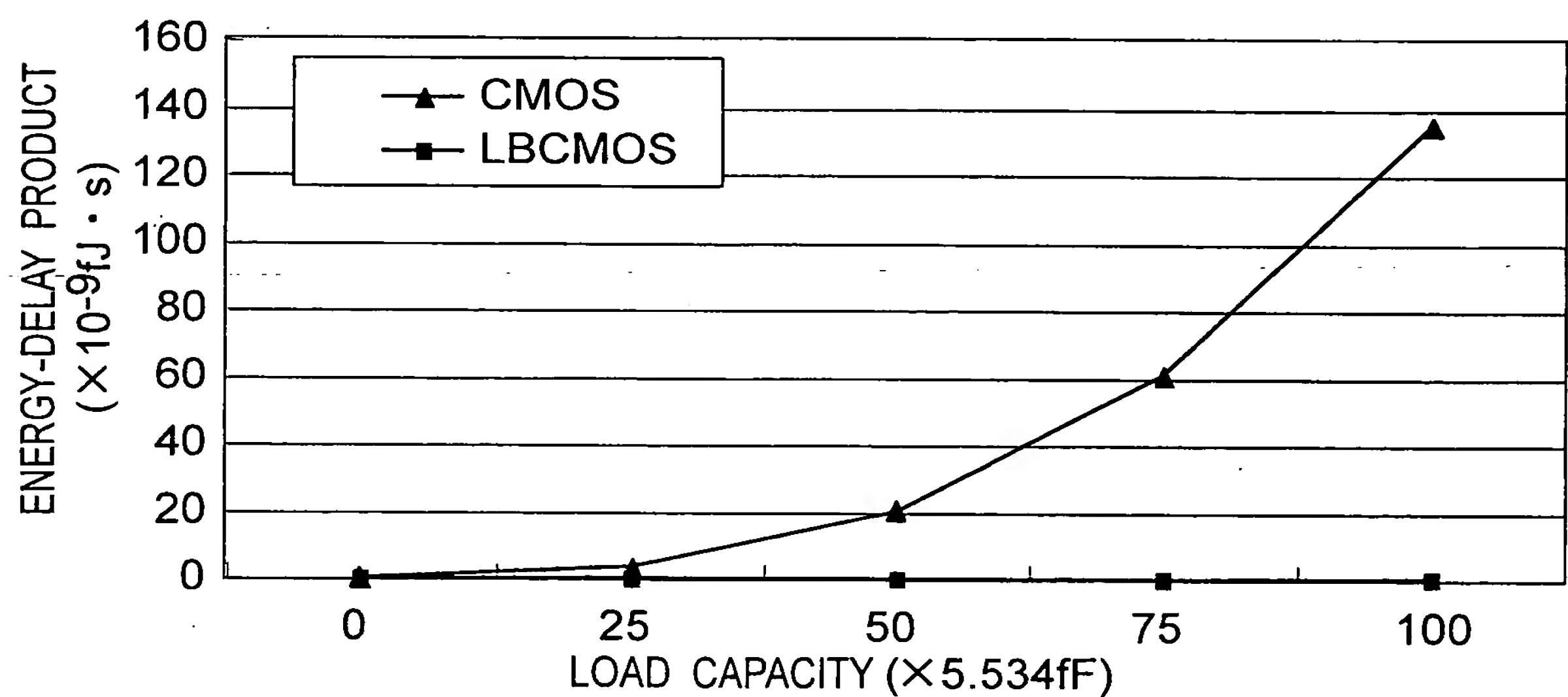
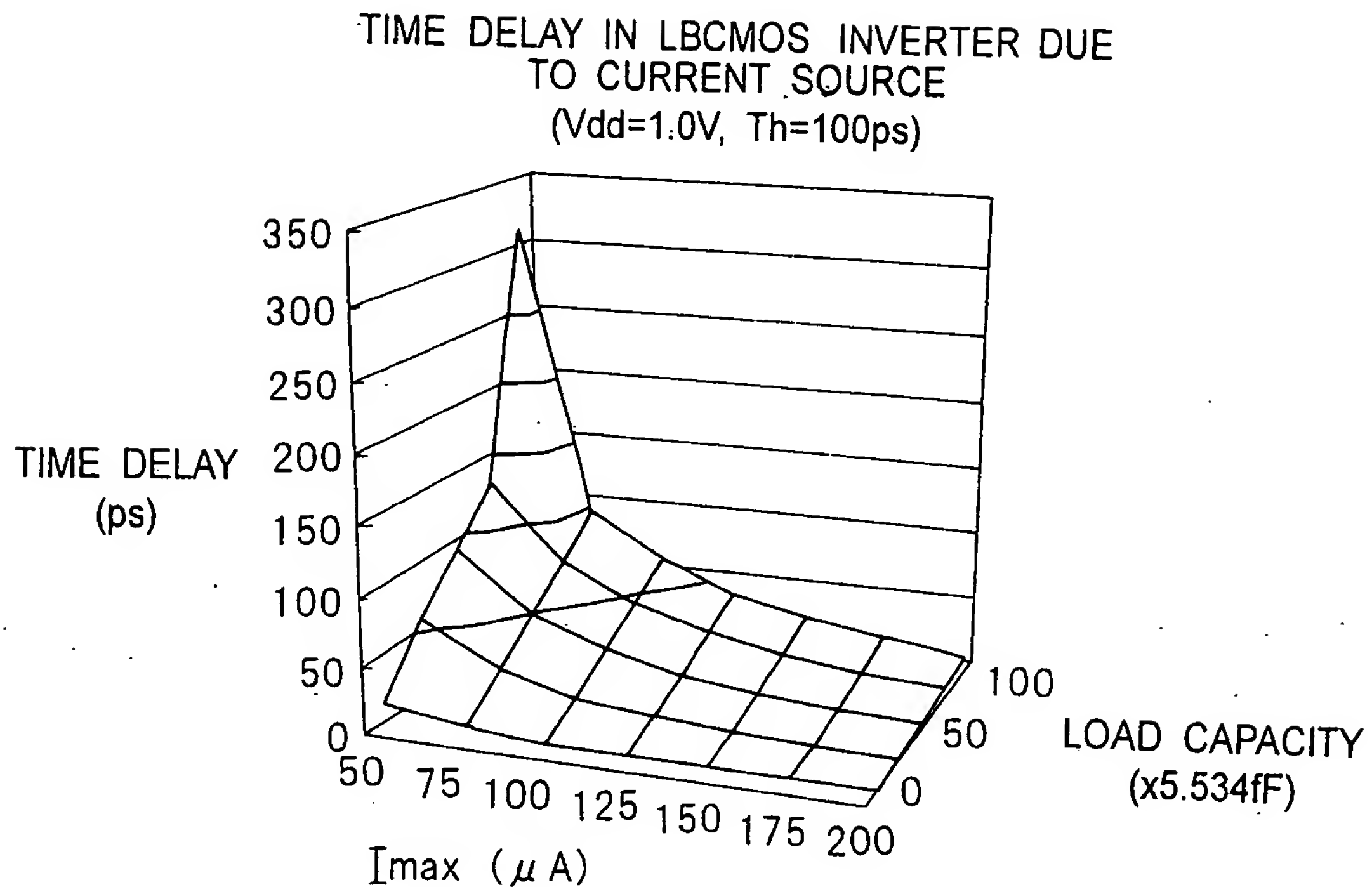
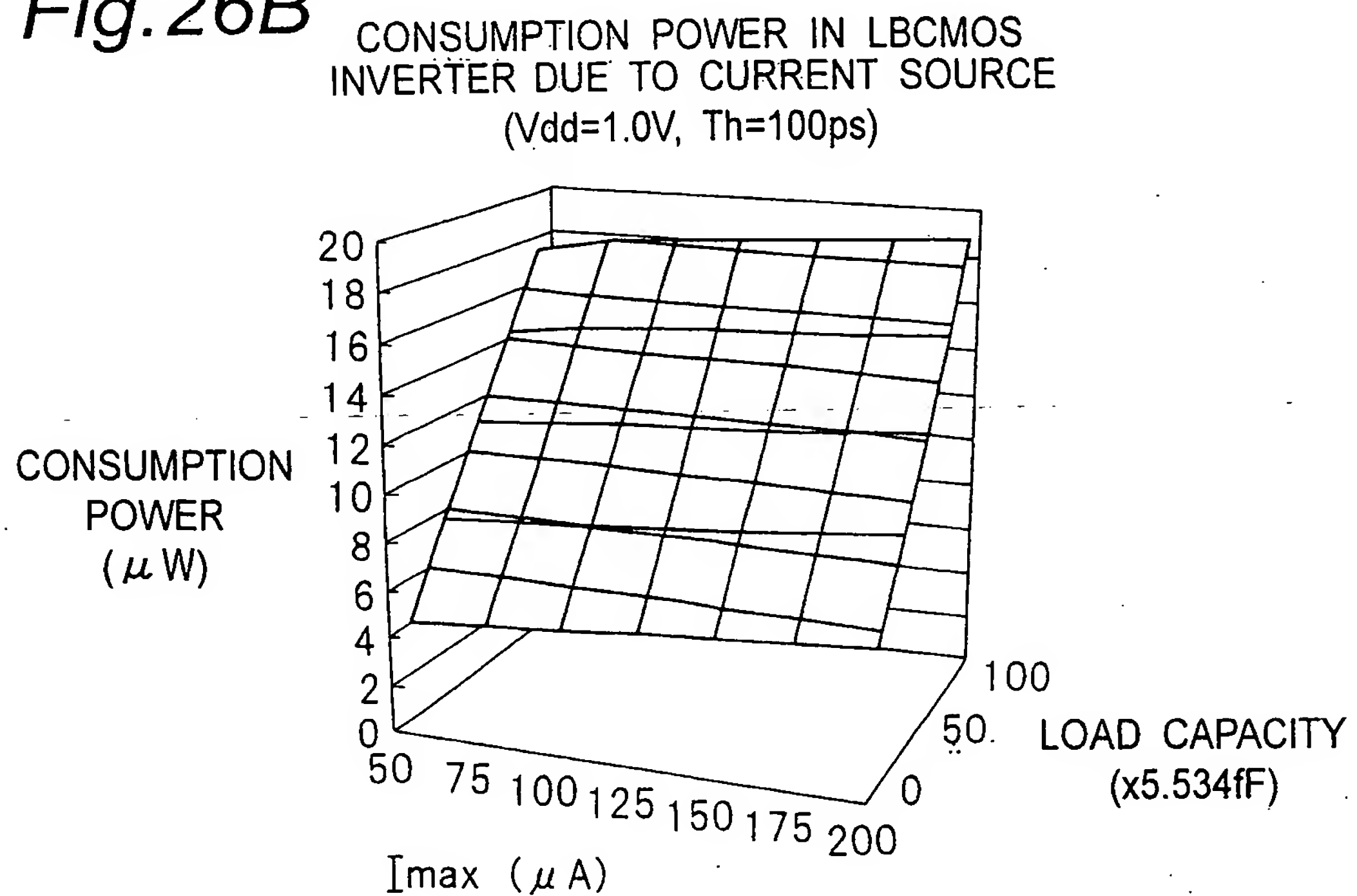
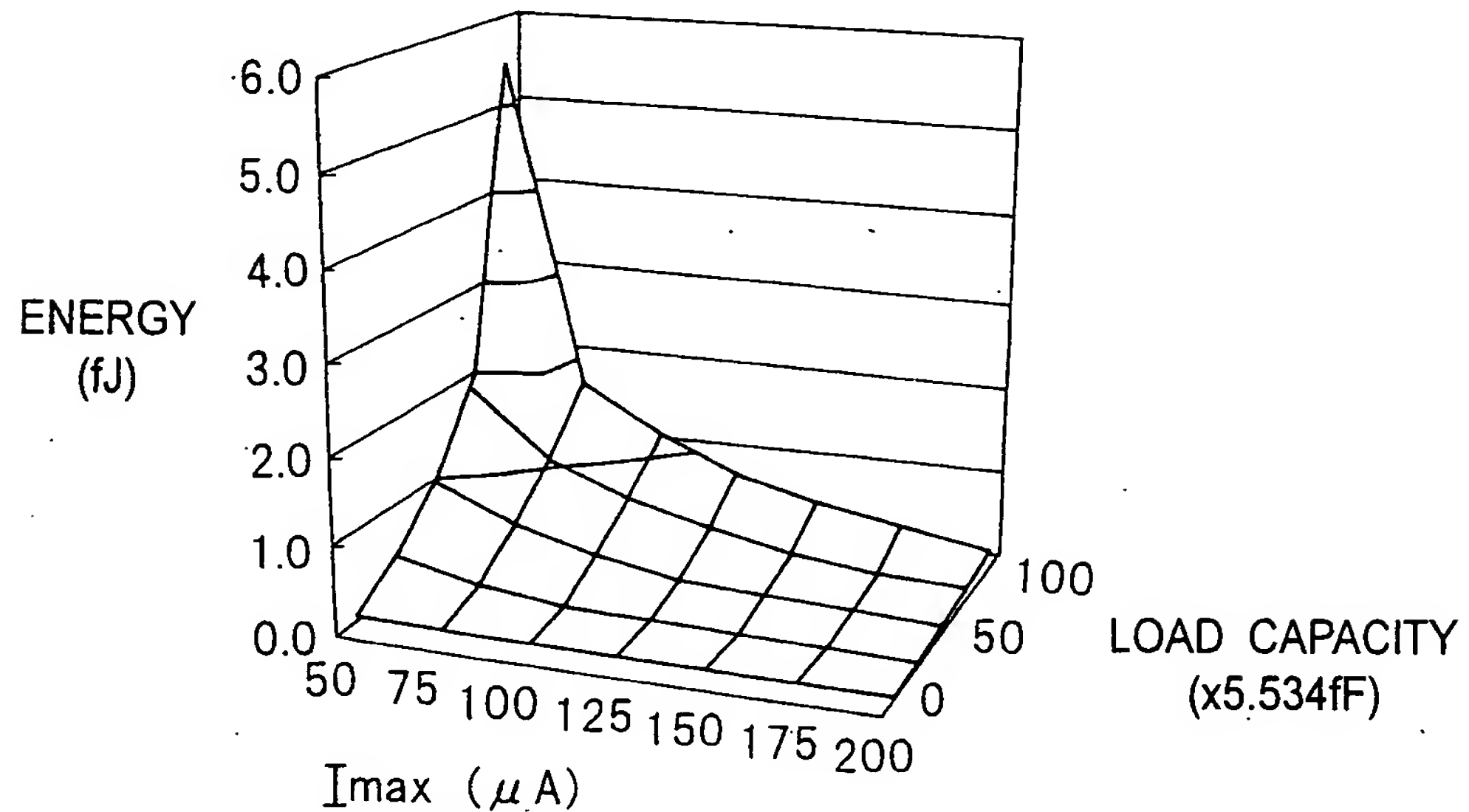


Fig. 26A*Fig. 26B*

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Fig.27A

ENERGY IN LBCMOS INVERTER DUE
TO CURRENT SOURCE
(Vdd=1.0V, Th=100ps)

*Fig.27B*

DELAY PRODUCT IN LBCMOS
INVERTER DUE TO CURRENT SOURCE
(Vdd=1.0V, Th=100ps)

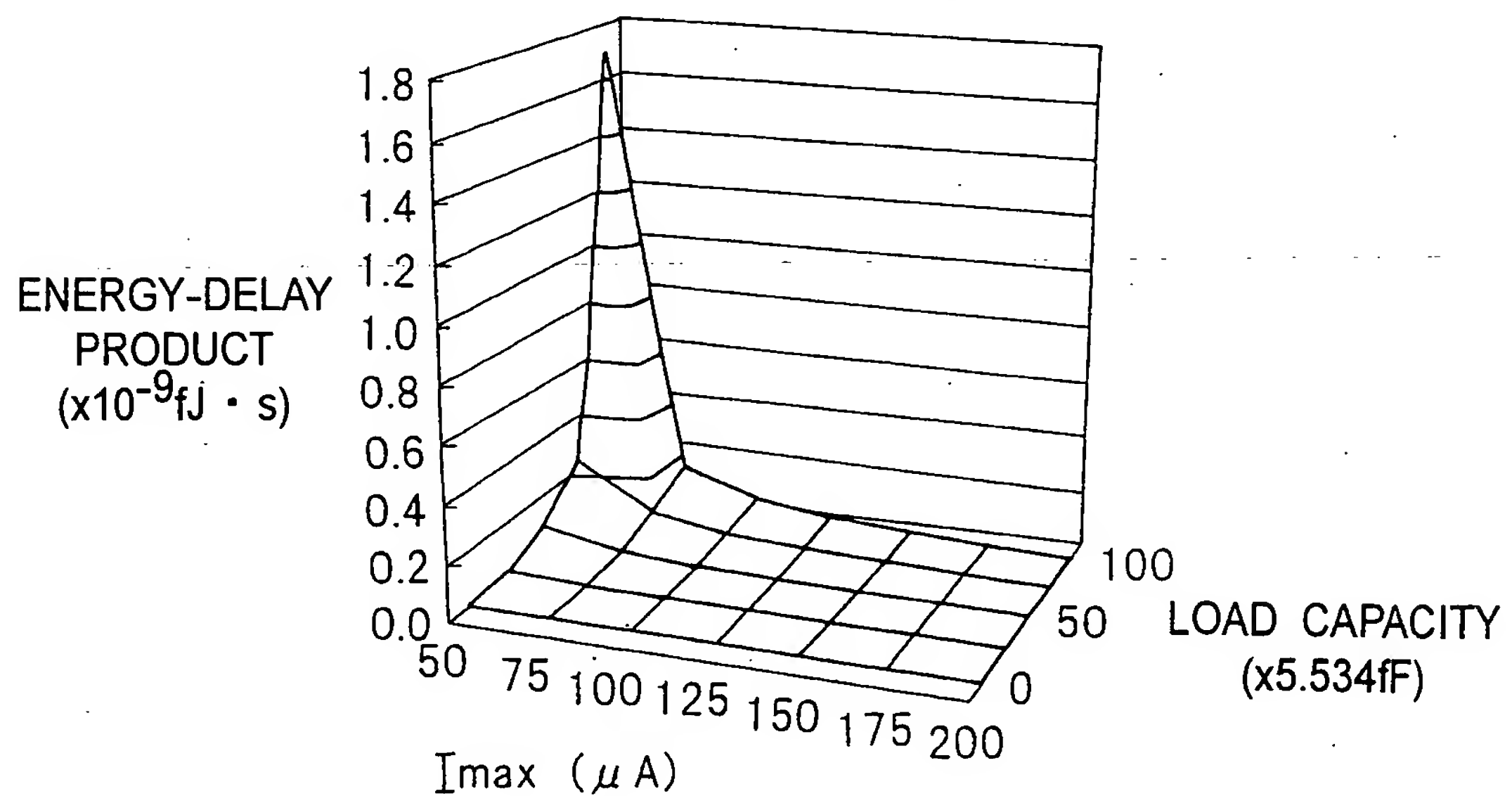


Fig.28A

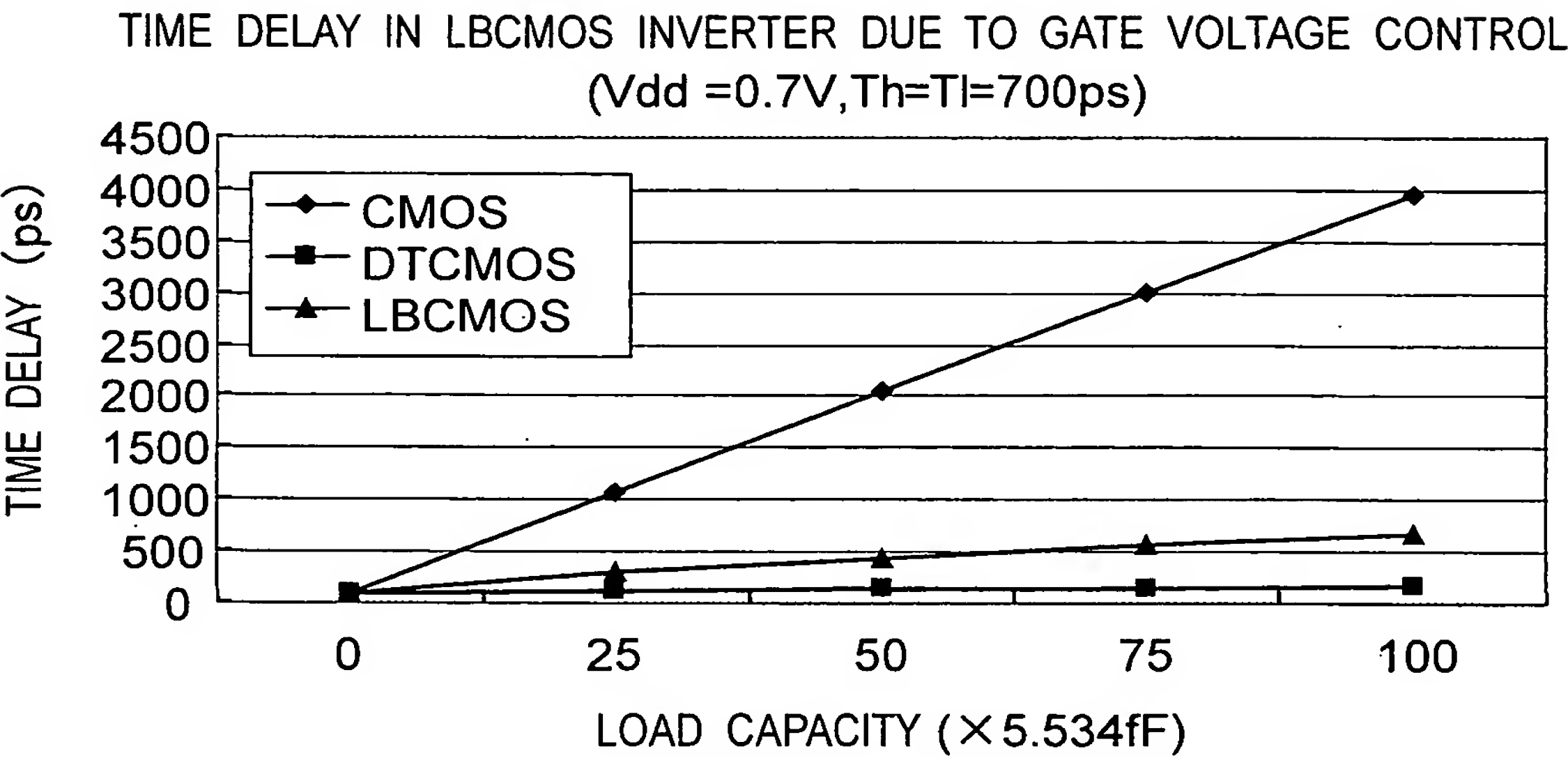


Fig.28B

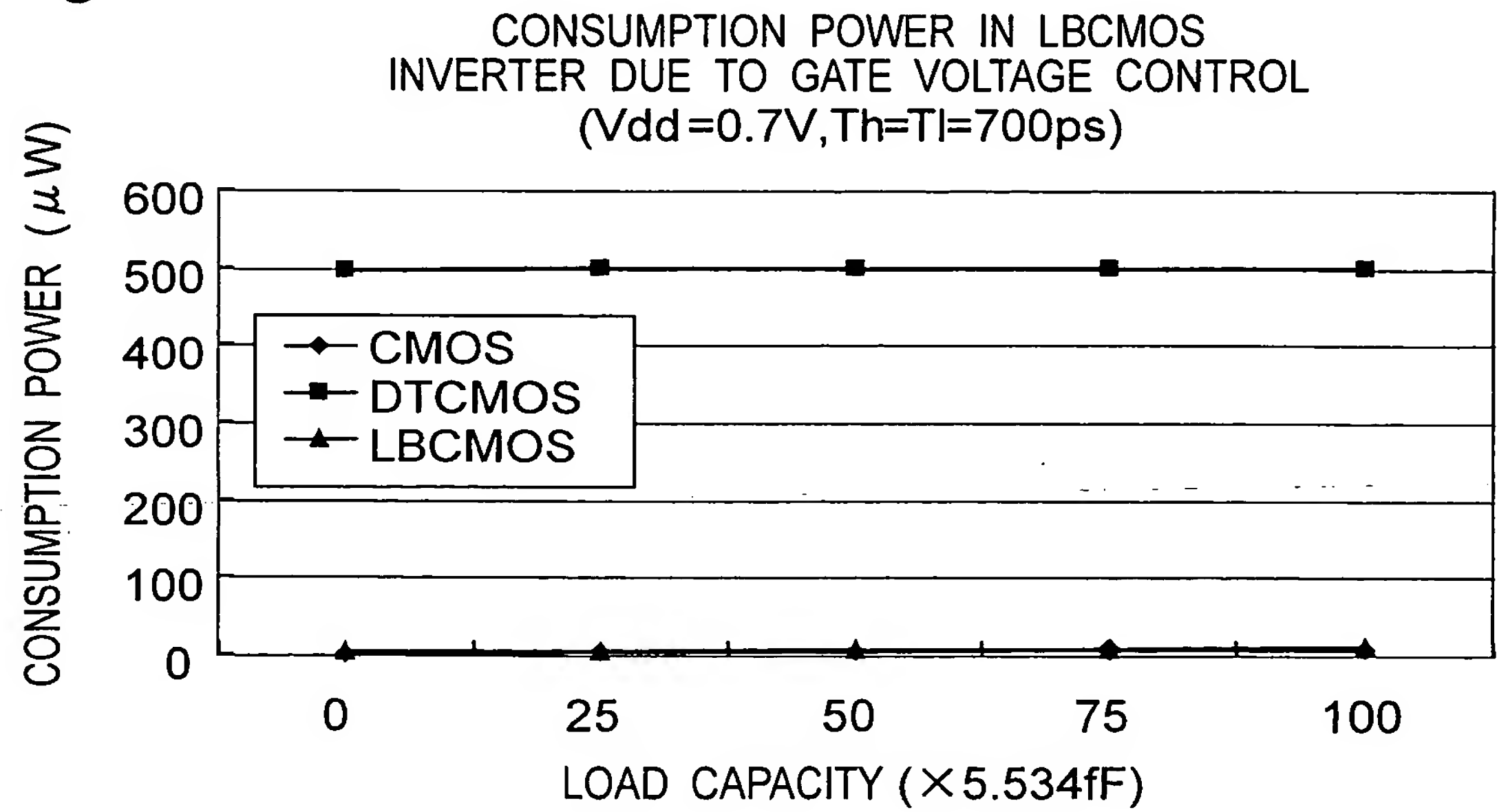
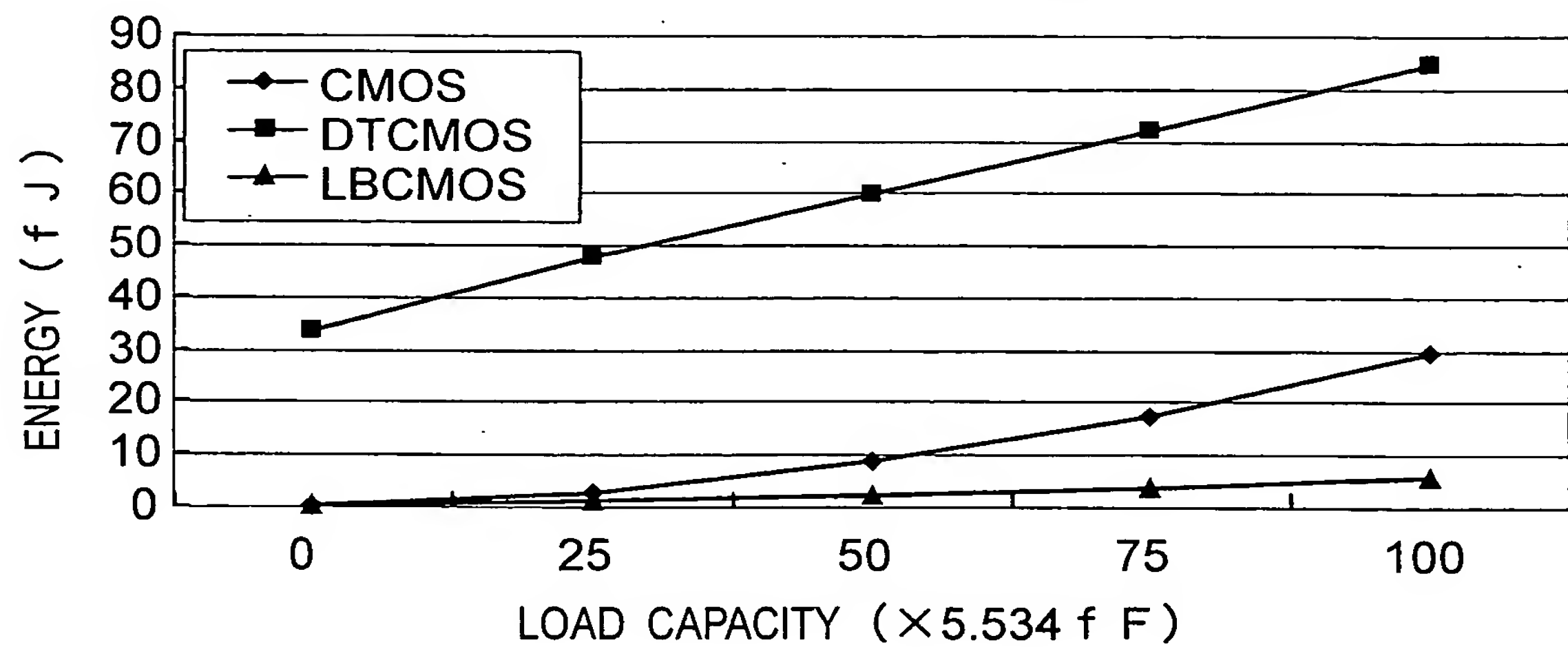


Fig.29A

ENERGY IN LBCMOS INVERTER DUE TO GATE VOLTAGE CONTROL
($V_{dd}=0.7V$, $T_h=T_f=700ps$)

**Fig.29B**

ENERGY-DELAY PRODUCT IN LBCMOS
INVERTER DUE TO GATE VOLTAGE CONTROL
($V_{dd}=0.7V$, $T_h=T_f=700ps$)

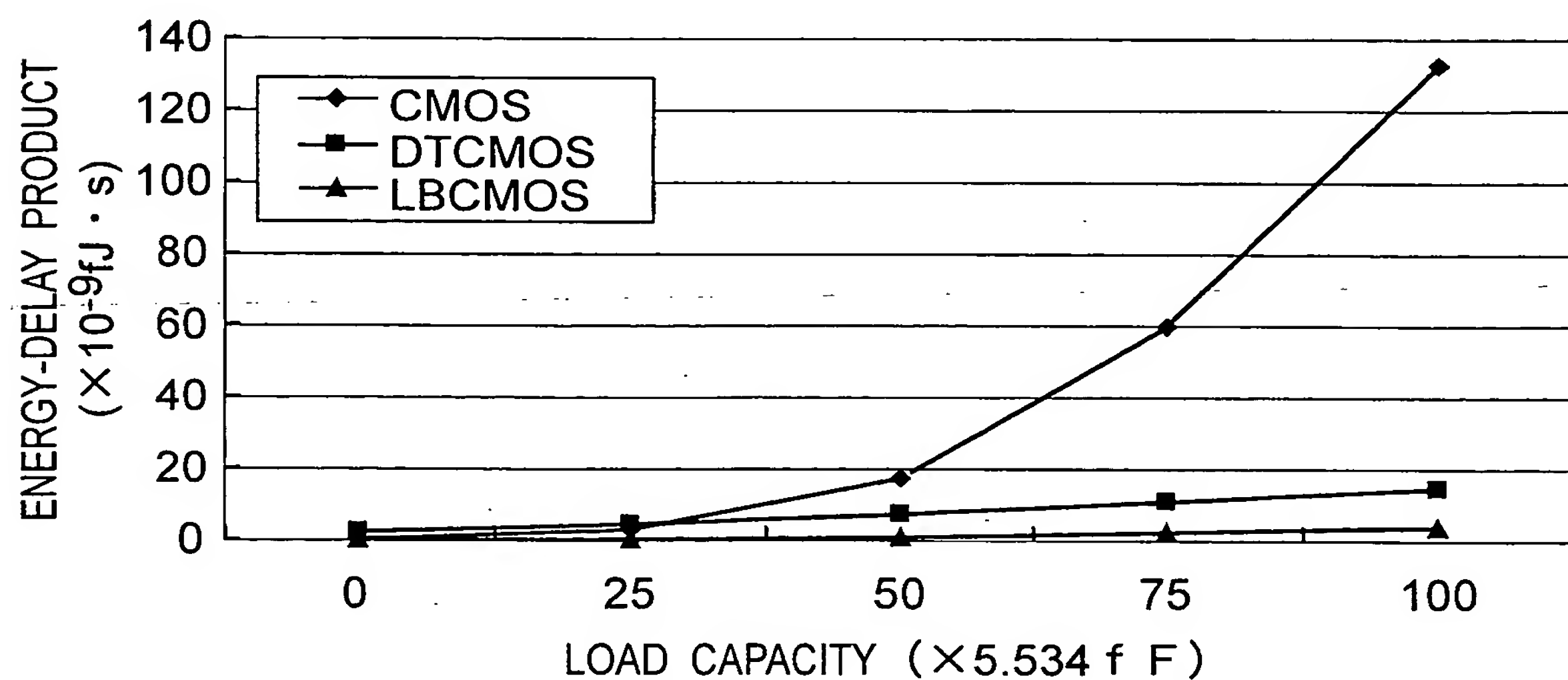
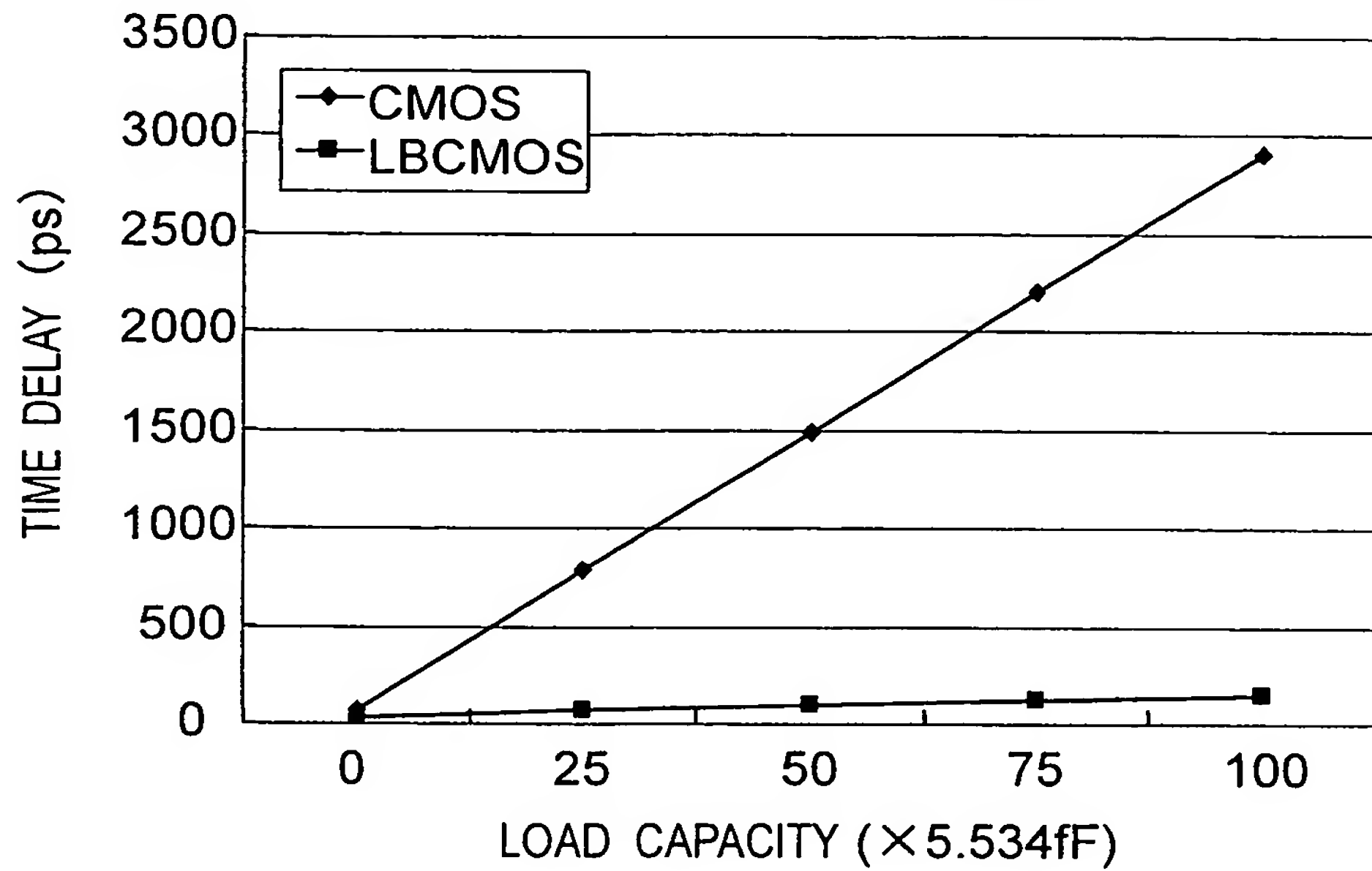


Fig.30A

TIME DELAY IN LBCMOS INVERTER DUE TO GATE VOLTAGE CONTROL
($V_{dd}=1.0V$, $T_h=T_l=700ps$)

**Fig.30B**

CONSUMPTION POWER IN LBCMOS
INVERTER DUE TO GATE VOLTAGE CONTROL
($V_{dd}=1.0V$, $T_h=T_l=700ps$)

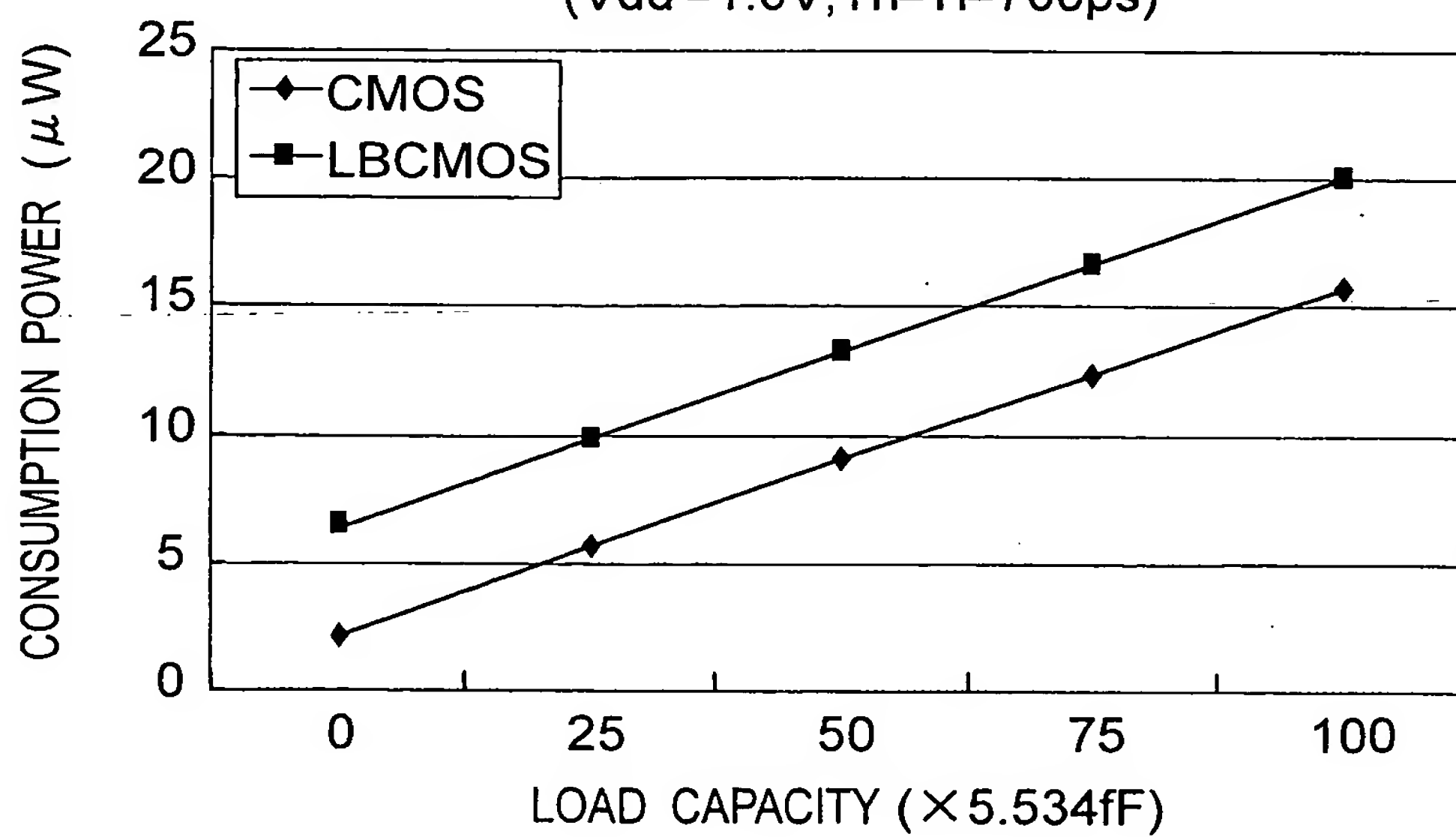


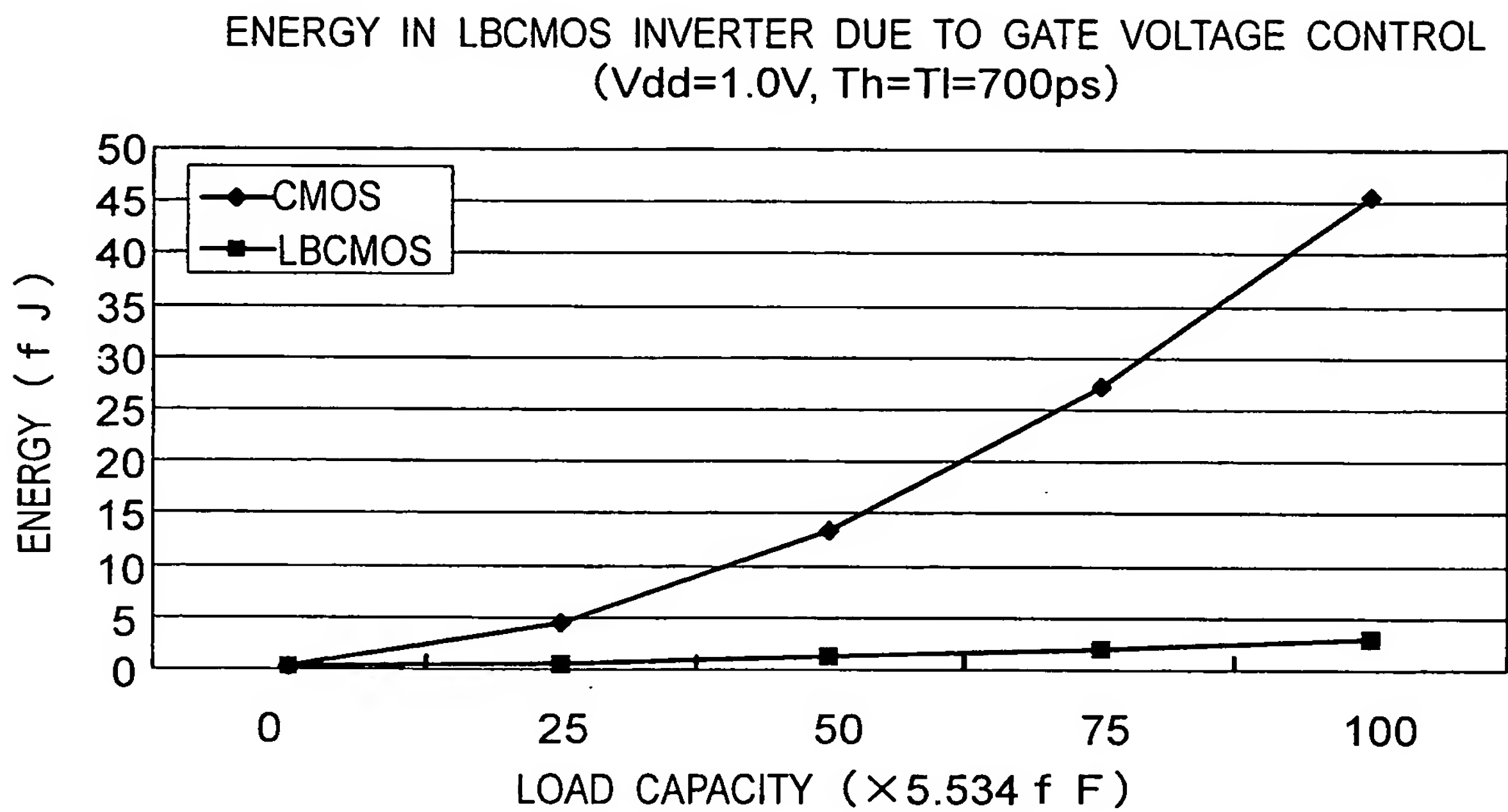
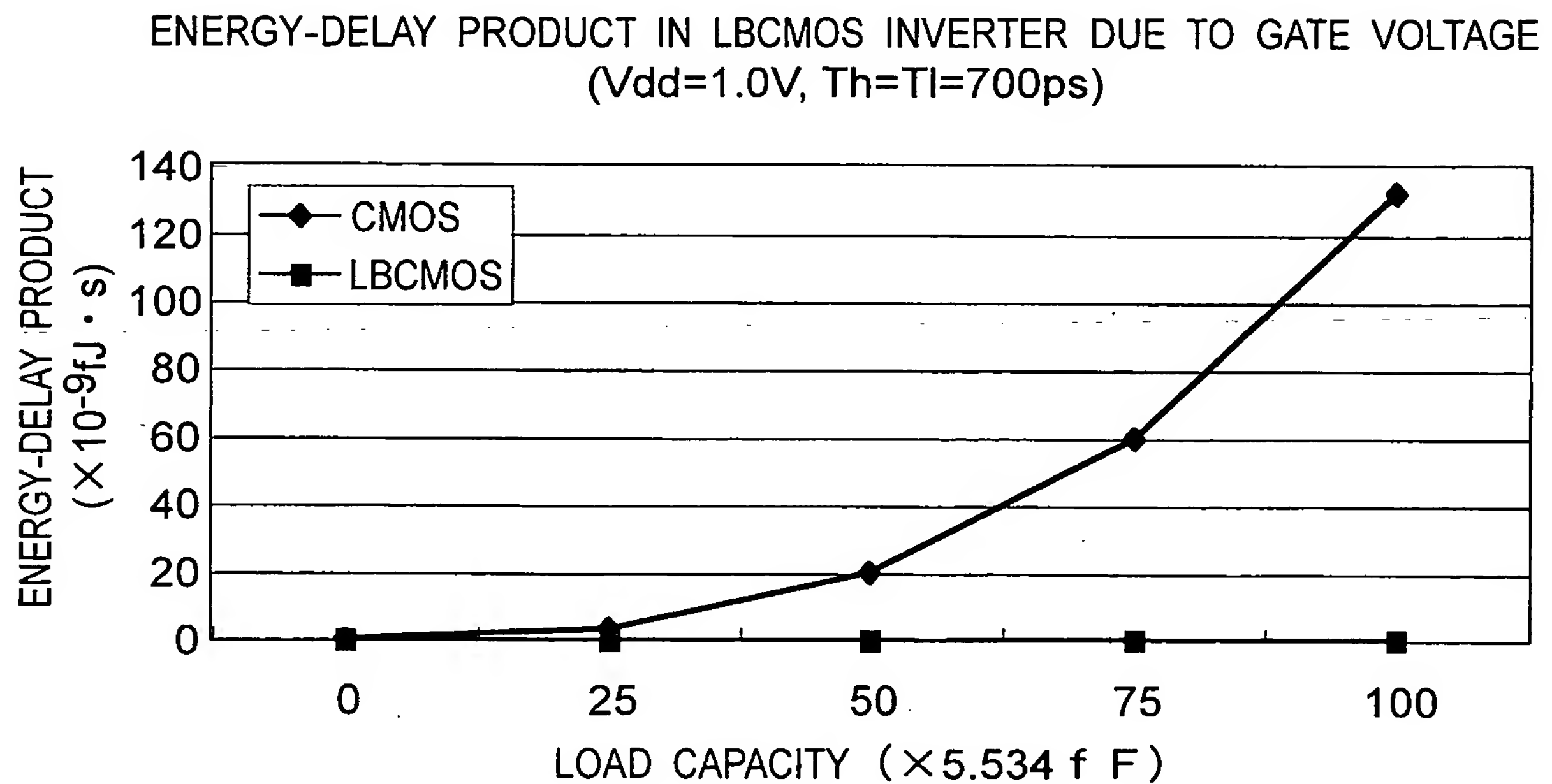
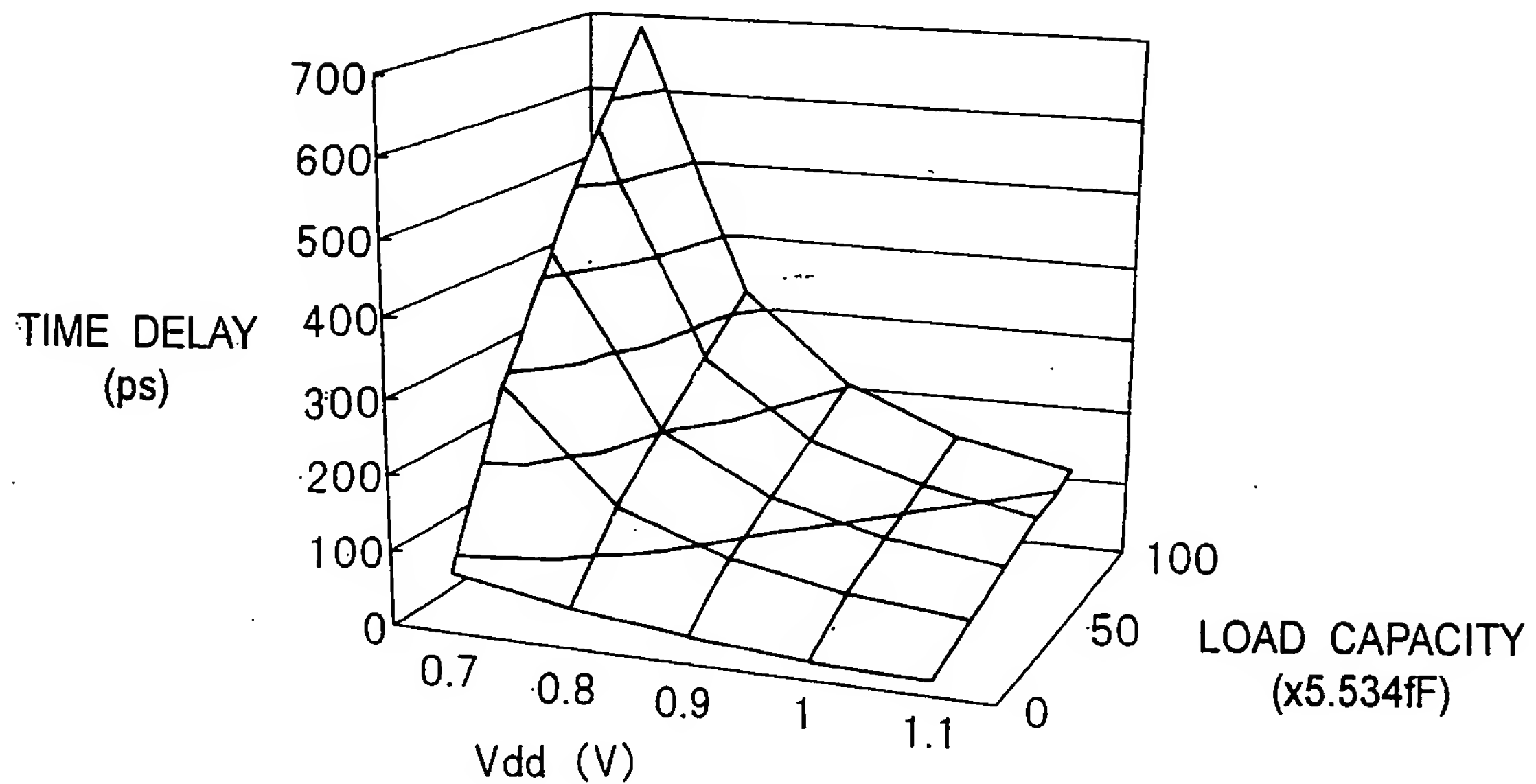
Fig.31A*Fig.31B*

Fig.32A

TIME DELAY IN LBCMOS INVERTER DUE
TO GATE VOLTAGE CONTROL
($T_h=T_l=700\text{ps}$)

*Fig.32B*

CONSUMPTION POWER IN LBCMOS
INVERTER DUE TO GATE VOLTAGE CONTROL
($T_h=T_l=700\text{ps}$)

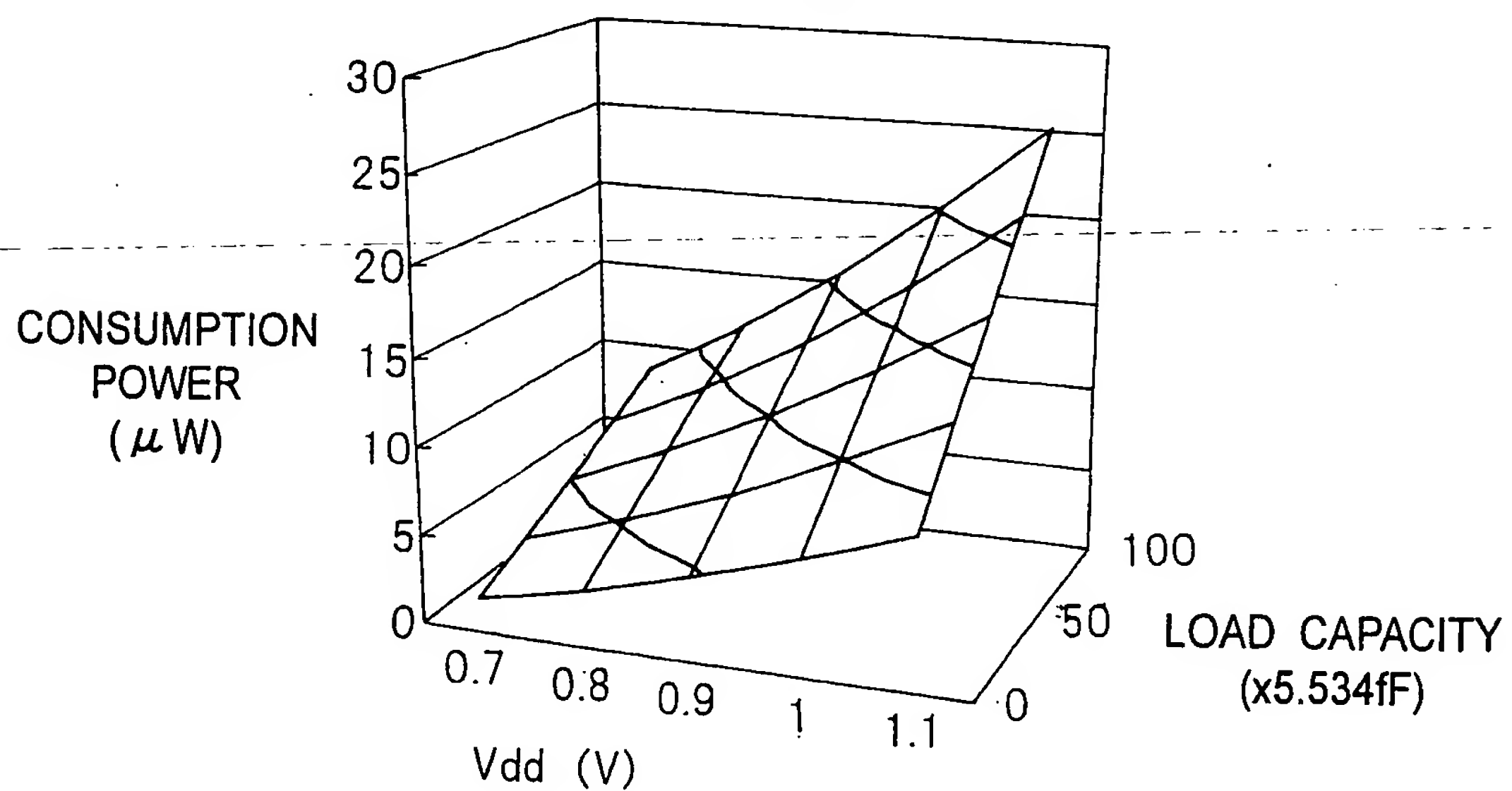
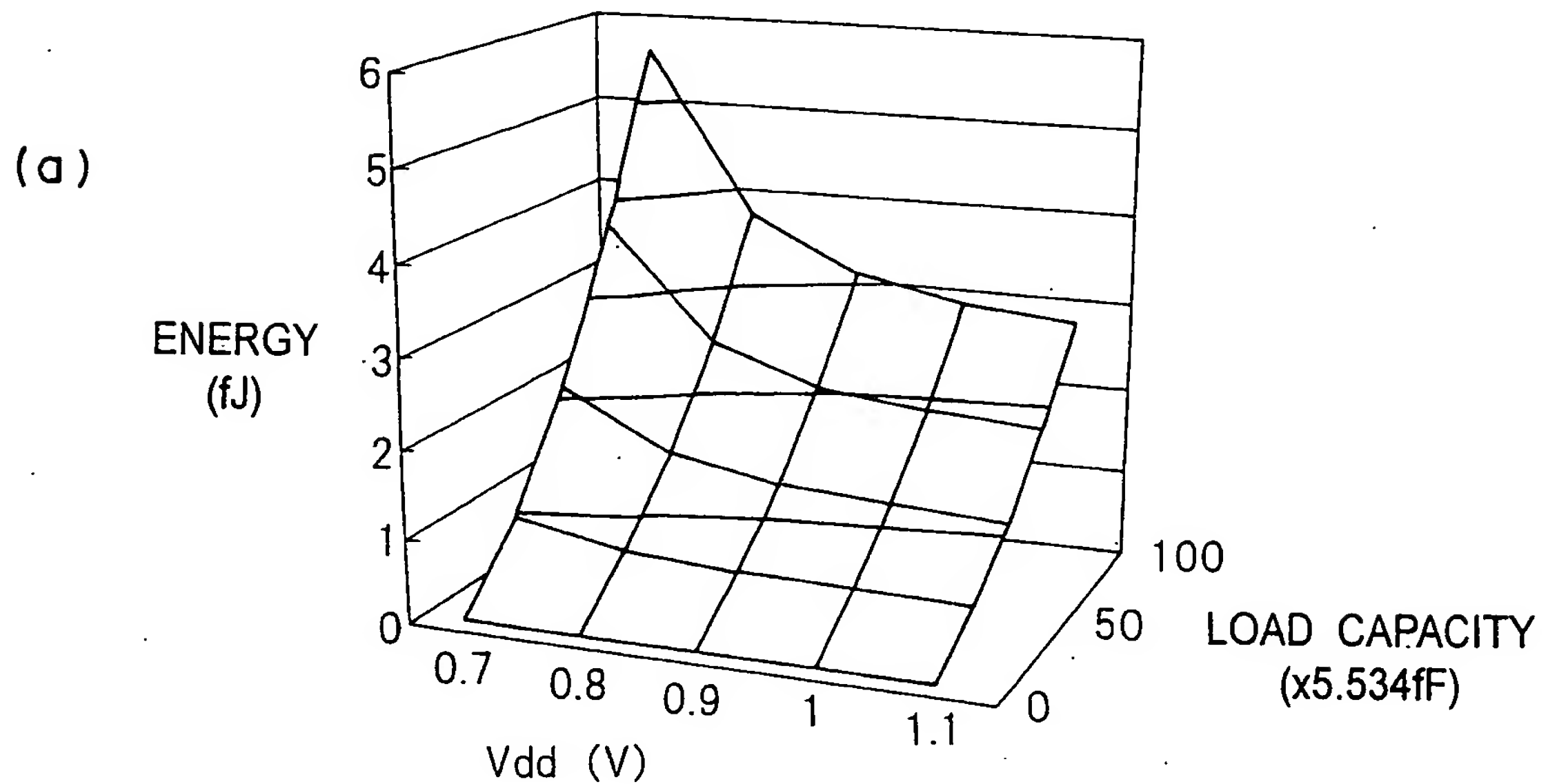


Fig.33A

ENERGY IN LBCMOS INVERTER DUE
TO GATE VOLTAGE CONTROL
($T_h=T_l=700\text{ps}$)

*Fig.33B*

ENERGY-DELAY PRODUCT IN LBCMOS
INVERTER DUE TO GATE VOLTAGE CONTROL
($T_h=T_l=700\text{ps}$)

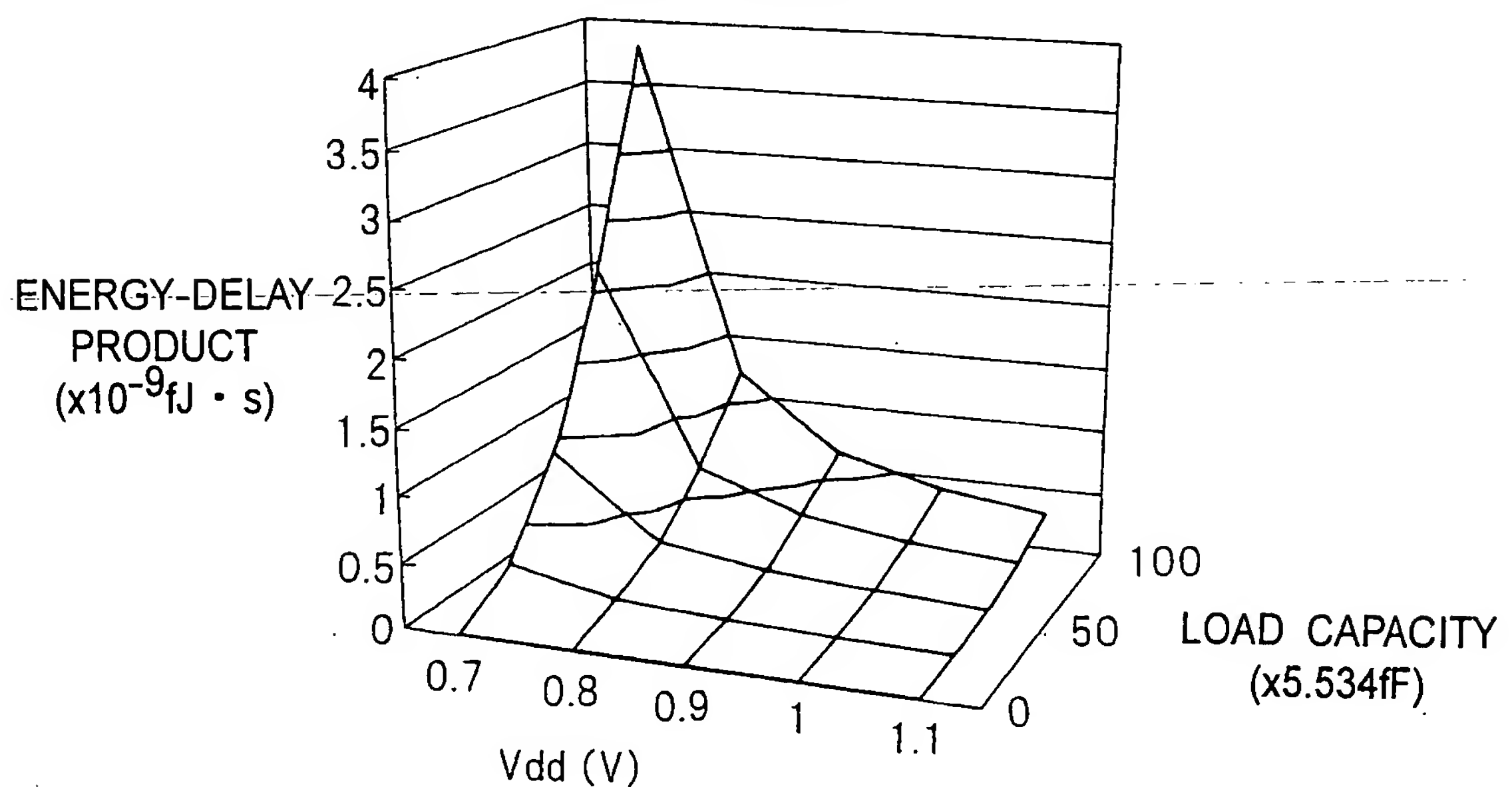
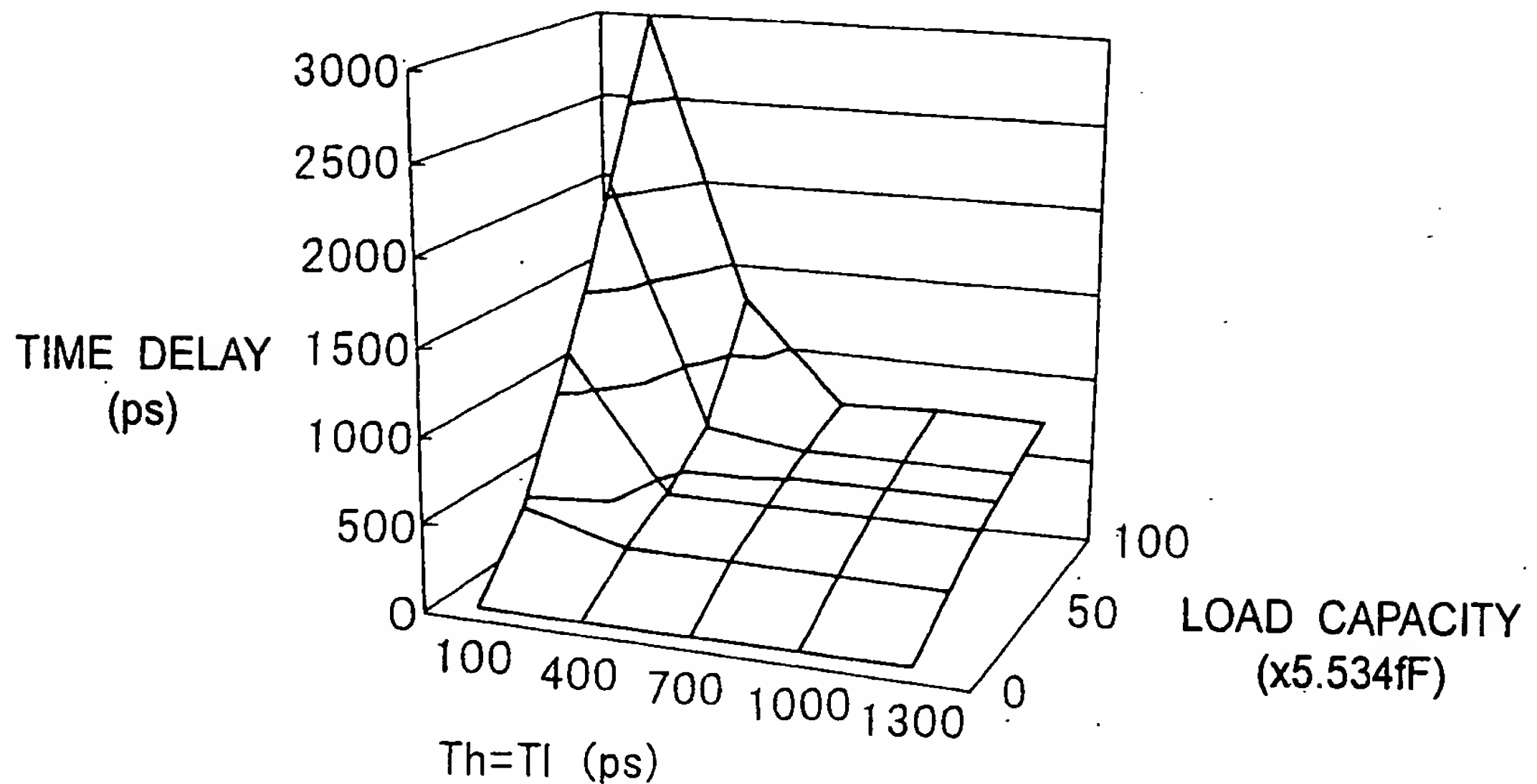
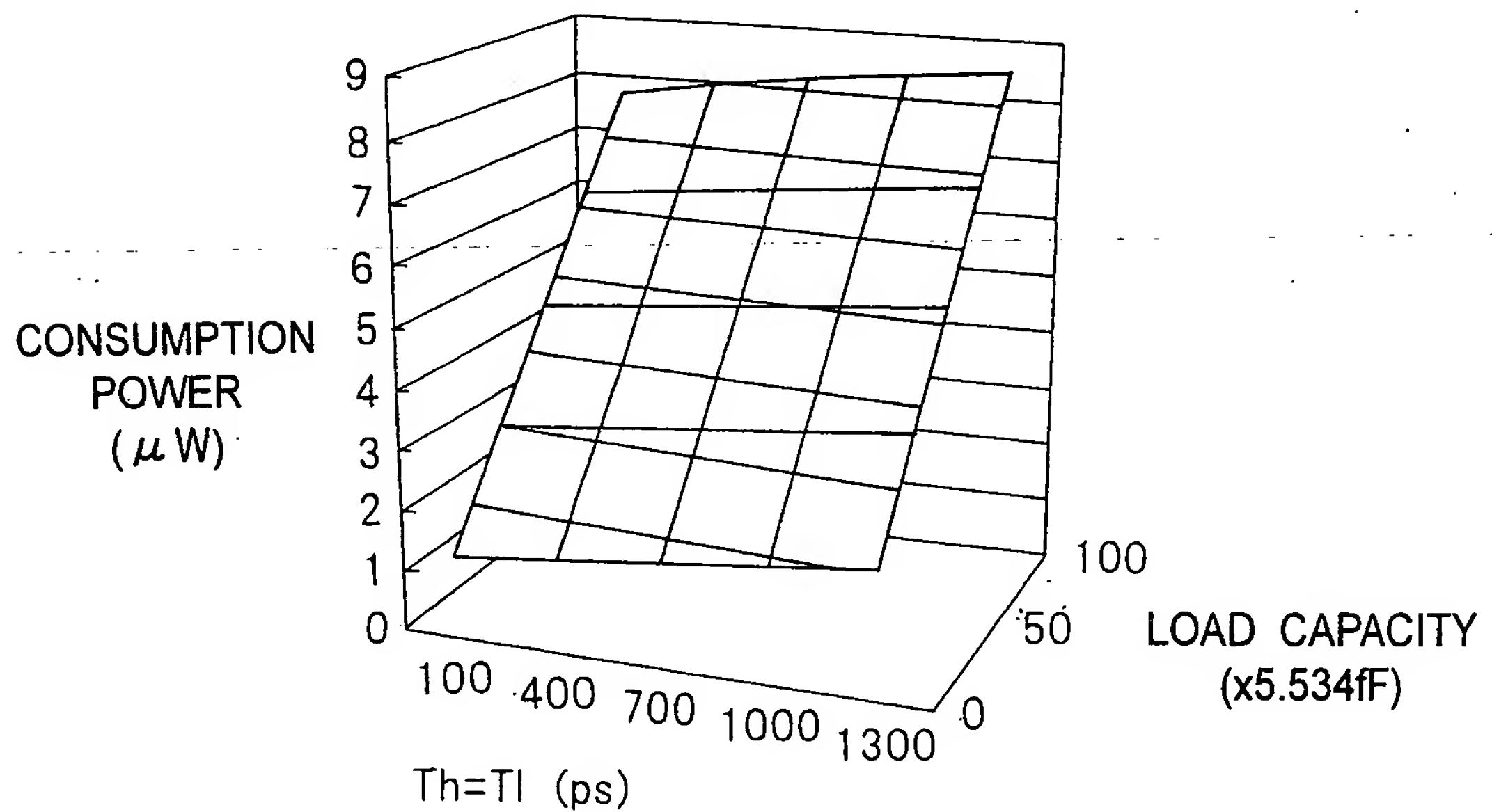


Fig.34A

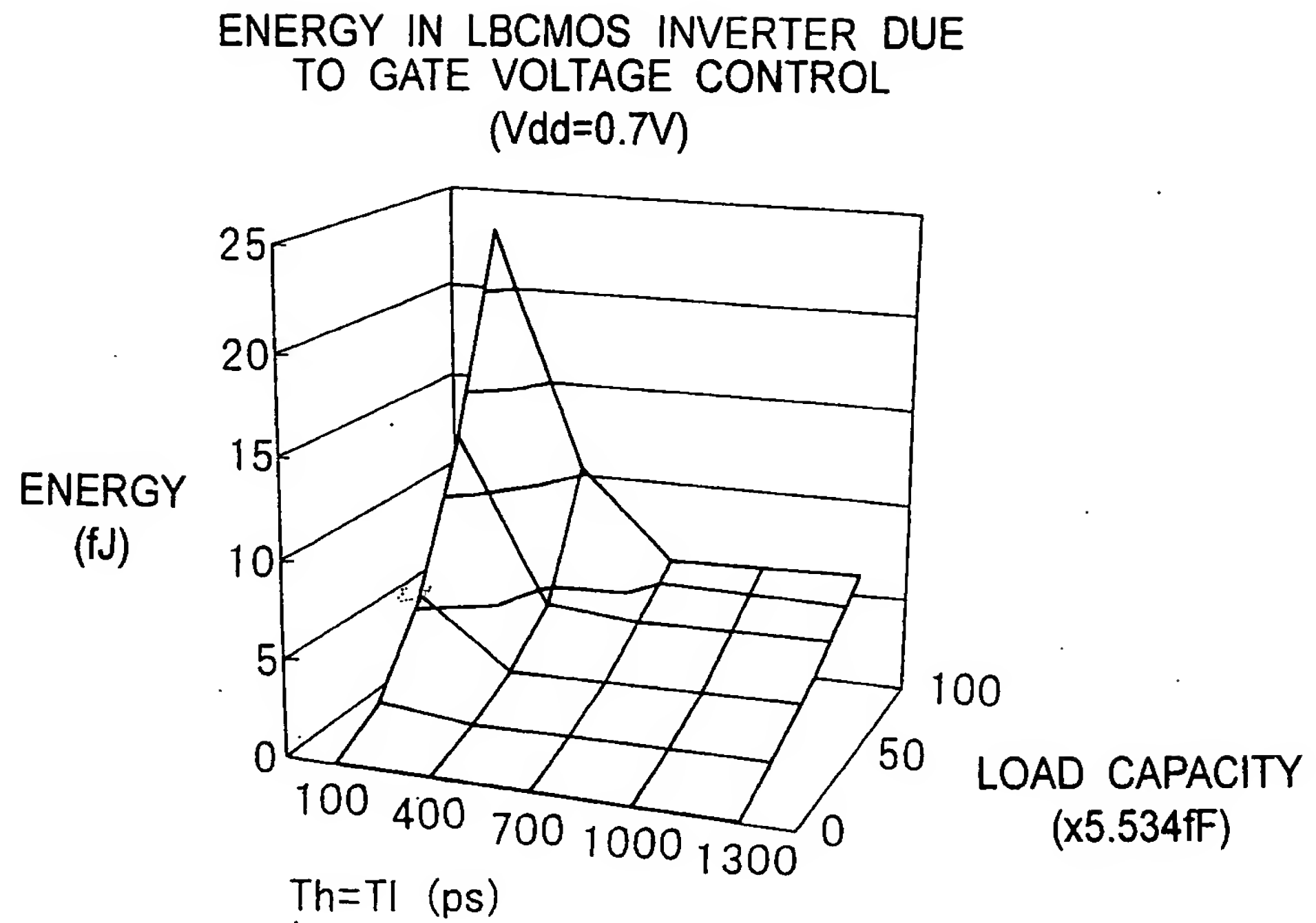
TIME DELAY IN LBCMOS INVERTER DUE
TO GATE VOLTAGE CONTROL
(V_{dd}=0.7V)

*Fig.34B*

CONSUMPTION POWER IN LBCMOS
INVERTER DUE TO GATE VOLTAGE CONTROL
(V_{dd}=0.7V)



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Fig.35A*Fig.35B*